New **MacBook** and **Mac Minis** Reviewed

Macworld

www.macworld.com | January 2010

SPECIAL HOME ENTERTAINMENT ISSUE

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Apple's New HDTV-Style iMacs

PLUS

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9 Great Desktop Speakers

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Windows Requirements:
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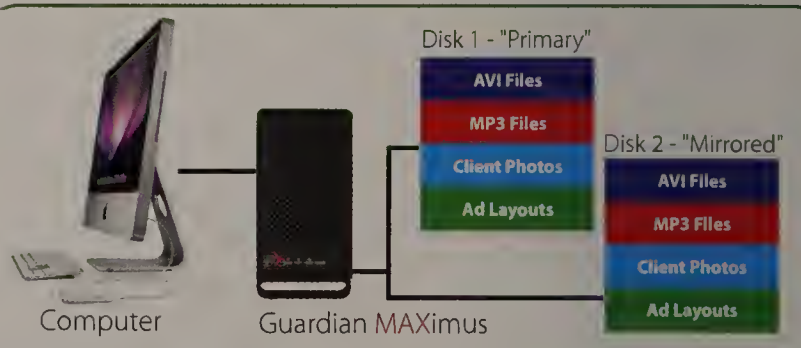

RAID-1 (Mirror)

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AWARDS & REVIEWS

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Photoshop user *"Perfect Space-ta-Speed Ratio That's So Important ta Graphic Professionals, Digital Phatagraphers and Designers."* -Photoshop User

the Mac Observer | mymac magazine 4.5 out of 5

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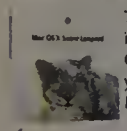

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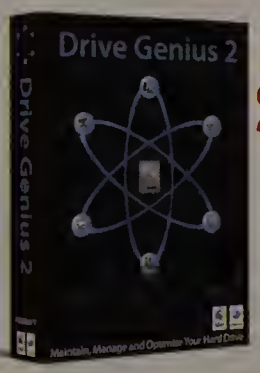

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Photograph by Peter Belanger

Screen image of *X-Men Origins: Wolverine* is from apple.com/trailers/ and is the property of Twentieth Century Fox.

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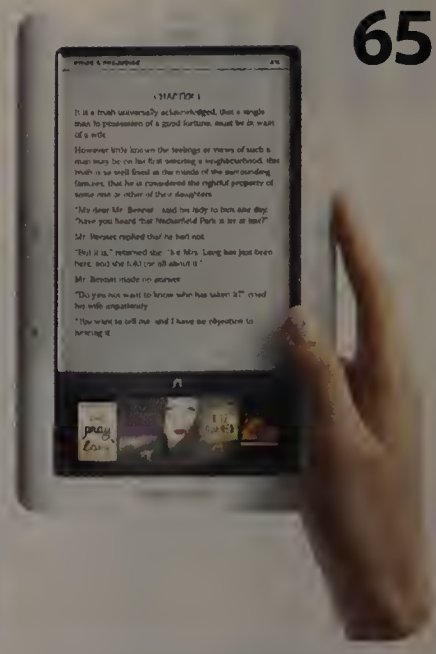

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Torture Tests with the ioSafe Solo
Chris Holt tests a hard drive's ability to withstand immersion in water and flames from a torch (macworld.com/5471).

We also recommend:

Macworld Video: Multiple-Clipboard Utilities—and Why You Should Use One (macworld.com/5473).

Macworld Video: Mac Novel-Writing Tools (macworld.com/5472).

Macworld Podcast: New iMacs and More (macworld.com/5474).

Macworld Video: Six More Snow Leopard Tips (macworld.com/5475).

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Braden Anderson & mr. caparro at the Air Conditioned Supper Club, Venice.
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Models: Braden Anderson (16bitdjacademy.com, family-affair.org) & mr. caparro (mrcaparro.com, family-affair.org). Photo: Erik Borzi (erikborzi.com).

 By Jason Snell

That's Entertainment

Beyond the iPod: Music, TV, and movies around the house

In April 2003, my colleague (and predecessor) Rick LePage wrote a glowing, ★★★★★ review of the SLIMP3 (macworld.com/5504), a tiny device that hooked into a stereo system and let you play the contents of your Mac's iTunes library via a handy remote control. More than half a decade later, the SLIMP3 has evolved into Logitech's Squeezebox line of music players. And there are a slew of other great products around—including the Sonos Multi-Room Music System—that can do much the same thing.

Audio Evolution

These products don't just play back what's on your iPod. They let you play your entire music library—stored on a Mac or even on a networked server—anywhere in your home. You aren't limited to your iTunes library anymore, either. These devices can tap into the incredible audio content available on the Net—and not just streaming Internet radio, but also music services such as Rhapsody, Pandora, and Last.fm.

Those online services are getting scary-good these days. For example, after a few years of my using Last.fm's Audioscrobbler iTunes companion, Last.fm knows the last 30,000 tracks I've listened to and, so, knows my musical tastes pretty well. The last time I played a

It's a great time to be a Mac-owning consumer of digital entertainment, whether it's music, movies, or TV shows.

Last.fm station, I listened to four songs and liked them so much, I bought two albums. (That's the scary part.)

And you don't need your computer or a hard-to-program universal remote to control playback of your audio. You can use your iPhone or iPod touch instead, as long as it's loaded with one of the several remote-control apps out there.

It can be hard to keep up with all these changes in the way we consume digital entertainment. That's why we put together this issue's "Hi-Fi Meets High Tech" feature (page 40). In it, we give you the lowdown on whole-home audio systems. We've also got advice on how to centralize your media library, take advantage of streaming audio services, and control your entire entertainment life from that remote control of the future—the iPhone or iPod touch.

Big-Screen Macs

In a happy bit of synchronicity, not long before we went to press with this issue, Apple released a slew of new Macs, including new iMac models that seem designed with home entertainment in mind. (Our reviews of those iMacs, plus the new Mac minis and MacBook, start on page 30.)

The iMac's 16:9 aspect ratio now exactly matches that of an HDTV. The new 21.5-inch model offers exactly the same resolution as a 1080p high-def TV. The giant 27-inch model could be seen as a TV with a computer attached; with its massive high-def screen and video input, you could hang it on a wall and attach a cable box or DVD player to it if you wanted.

As those new iMacs remind us, the Mac is a powerful entertainment box in its own right. That's why we had Dan Frakes review nine desktop speaker systems that will make your Mac sound better than ever ("Turn It Up," page 51).

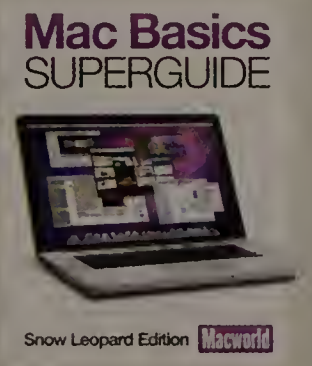
Truly, it's a great time to be a Mac-owning consumer of digital entertainment, whether it's music or movies or TV shows. As for books and magazines, well, for now I still have my Kindle. But on that front, who knows what 2010 will bring from the likes of Apple?

Follow **Jason Snell** on Twitter at twitter.com/jsnell or e-mail him at jason_snell@macworld.com. Or you can become a *Macworld* fan on Facebook, at www.facebook.com/Macworld.

PHOTOGRAPH BY PETER BELANGER

Mac Basics Superguide

We don't cover beginner topics in *Macworld* much. But we know that lots of people are switching to the Mac. That's why we created *Macworld's Mac Basics: Snow Leopard Edition*. This new edition has been updated for Mac OS X 10.6 and is available as a PDF download or a full-color paperback; it's the book I sent my Mom when she got a new Mac. For more information, visit macworld.com/superguide. Enter coupon code MWREADER6 for a special $3 discount.



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Snow Leopard Angst

Apple's newest operating system leaves some users feeling agitated

Snow Coverage

I was so grateful to see such an extensive guide to the new OS software ("Let It Snow!" November 2009). Every time Apple releases new software, I'm very anxious to see its potential, but most of the time I feel scammed because I'm not aware of all of its features. Your 16-page guide includes detailed descriptions concerning the installation of the update, the 64-bit computing, and so much more. Thanks to this article, I know that Snow Leopard is going to be more than I expected.

Matthew Lorenz

I closely followed *Macworld*'s excellent coverage of Snow Leopard when the OS first came out, but was disappointed when one of the features I was most interested in got no coverage at all: read-only HFS+ support in Boot Camp. As someone who uses Boot Camp a lot (and I mean *a lot*), I miss being able to quickly access my Mac files while in Windows without having to restart. I've had some bad experiences with similar drivers (such as Paragon's NTFS for Mac), so before I install Snow Leopard, I'd like to know more about the Windows HFS+ driver.

Isaac Wilcott

Upgrade Anger

I was totally amazed that you recommended installing Snow Leopard when the Mac forums on the Internet are filled with posts from Photoshop users who are frustrated with the many crashes they are experiencing. It's also my understanding that I will have to upgrade from QuarkXPress 7.5 to 8 for Quark to work. So a $29 upgrade would actually cost hundreds of dollars in lost time and money. I am a professional graphic designer and photographer with a huge pro system, and I can't use Snow Leopard until its bugs are fixed. I also live in a smaller town and have to do all my Mac maintenance myself. With live support so hard to access at Apple and Adobe, getting my system back up and running is usually a nightmare.

Mary Williams Hyde

I sure got a snow job when I purchased Snow Leopard. After working with Leopard and using iPhoto 6, iDVD 6, and iMovie 6 in that OS without any problems, I found out that iDVD was excluded from the single-disc version of Snow Leopard. It sure isn't advertised that way. iDVD is available only with the boxed set. It took three tech-support personnel and a system engineer before I found out why I couldn't open iDVD 6. How cheap can Apple be, to exclude an application that works in conjunction with iPhoto?

Fred Troiano

Upgrading to Snow Leopard 10.6 has been both an operational nightmare and a financial disaster. I've been an avid Mac user since about 1990 and this is the first time I can say, unequivocally, that I deeply regret upgrading. My photography studio has invested a lot of time, effort, and dollars in creating a precise, effective production-system

PHOTOGRAPH BY PETER BELANGER

OVERHEARD ON THE FORUMS

The reality is that with so many innovative features introduced in Leopard, Apple has less and less to add.

natmusak
macworld.com/5496

We pay for cellular phone and data service with our hard-earned money. We shouldn't care about the reasons AT&T has for not giving us quality service. We should complain, and if AT&T wants our business, it should fix the problem.

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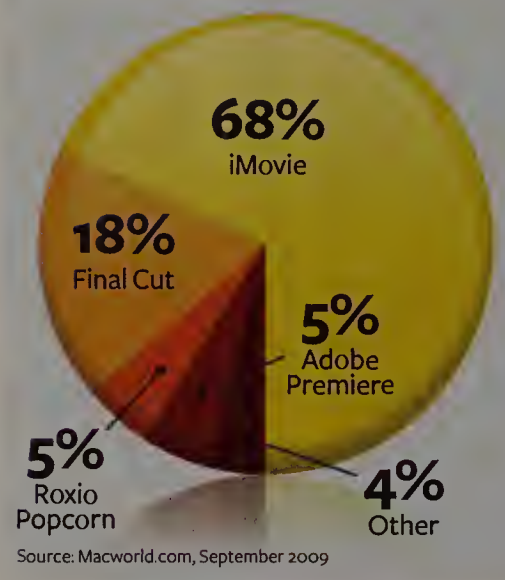
READER POLL

What movie-editing software do you use the most?



Source: Macworld.com, September 2009

workflow. When we upgraded to Snow Leopard 10.6, we lost all use of our Epson 2200 printers, forcing our entire production to completely cease. It turns out that Snow Leopard 10.6 not only dropped the AppleTalk configuration, but it also has no compatible printer drivers for the Epson 2200. Even now, after establishing alternate production methods, we are still having problems with all our other printers. Had I known then what I know now, I would never have upgraded to Snow Leopard.

Gary L. Behr

The most annoying problem I've had since installing Snow Leopard is the inability to click a group name in Apple Mail and have all of the e-mail addresses appear in the "To" box. In 10.6.1, if you select the group name and click, the only name that is entered is the last name that was highlighted, rather than all of the names (addresses). A workaround is to choose Select All within the group and then click "To," but it was more convenient the other way.

William Parberry

I eagerly awaited the arrival of Snow Leopard so I could have my whole group use iCal for calendar functions. I quickly discovered, however, that there is no way to access shared calendars under iCal. I am still forced to run Entourage to see the shared calendars to which I have access and write privileges.

Stephen Irons

I did the "no-brainer" Snow Leopard upgrade and am now plagued with a quirky system—I am finding more and more things that do not work, or that work in a manner that they're not supposed to. Leopard was fine. Why did I change?

Walter Meyers

Mag Makeover

The new format is terrific (November 2009). I actually sat down and read it from cover to cover—I can't remember when I last did that. The reformatted, redefined categories are visually

effective. The categories are obviously based on the end-user. Nice to know there are Mac users like me who are neither geeks nor business users.

Suzie Brandeau

I love the new look. Before I read any articles, I browsed through the table of contents and knew right away that the magazine had changed. Organization is my middle name, so I'm pleased to see the newly arranged groupings. Thanks for making a great magazine even better.

Louise Bailey

Just got my November issue, and instead of taking up to two hours to go through it, I was done in less than 20 minutes. I read Jason Snell's *From the Editor's Desk* (which I always read) and then *MacUser*. I skipped to page 53 after that. Then I skipped over the "Online Backup Services" feature—don't use them; skipped over PowerPoint, Excel, and Word tips (*Working Mac*)—I use them, but only their basic functionality; skipped *Playlist*—I don't have an iPod or use iTunes; glanced through *Digital Photo*; skipped *Create*; and glanced through the rest of the issue. Thanks for the revamp, it's made my life more productive.

Sieg Deleu

New Nano

The new shuffle became the athlete's iPod when it lost the Click Wheel and acquired voice controls ("Apple Updates iPod Lineup," *Playlist*, November 2009). Now the nano is very much the teenager's iPod. It's more affordable, especially for teenagers, who won't have to buy a separate camcorder. It is more of an all-in-one solution that includes radio.

bhrocks12

The lens size of the nano has very little to do with the image quality. It either has good glass in there, or it doesn't. All you really lose with a small lens is a shallow depth of field. That means everything shot with the nano, up close and far away, will be in focus, which is what many people want. The real determining factor is the size of the CCD chip, which is 640 by 480 pixels. HD starts at 720 pixels. People who really care about video quality will not be shooting with an iPod nano, but it's fine for parties and vacations.

RogueCrew

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APPLE: WHAT RECESSION?

Laptops, iPhones lead the way to (another) record quarter

By Philip Michaels

While the rest of the American economy staggers along, with weak consumer demand and scrawny profits, Apple continues to cruise, with robust sales and brawny balance sheets.

In the quarter ending September 30, 2009, the company sold 3.05 million Macs—a 17 percent increase over what it sold in the same three-month period in 2008. The previous high-water mark was 2.61 million Macs sold in the fiscal fourth quarter of 2008.

That success was due in part to the June 2009 overhaul of Apple's notebook lines, when prices were cut on almost every laptop model. Apple sold nearly 2.3 million laptops in the quarter, accounting for 74 percent of all Macs sold. "Last quarter was the quarter of the portable," chief operating officer Tim Cook said during the fourth-quarter earnings call with analysts. In response to one comment that "the [laptop] price cut worked," Cook responded loudly, "Yes, it did!"

Apple executives also credited strong back-to-school sales and growth in overseas markets. (See "Swiss Hit: Apple's Overseas Success" for more.)

Mac sales outpaced the 2 percent growth of the PC market as a whole, according to market-research firm IDC; Mac sales have grown faster than the overall PC market in 19 of the last 20 quarters.

iPhone Good, iPod Not So Much

At the same time that Mac sales were so healthy, iPhone sales rose 7 percent, from 6.9 million a year ago to nearly 7.4 million units in 2009. (The 2008 number was boosted by the rollout of the iPhone 3G in a number of global markets.) Those sales generated $2.3 billion in revenue—a 185 percent jump from 2008's fourth quarter.

Apple executives expect the iPhone sales momentum to continue, as China Unicom and new carriers in the United Kingdom and Canada start offering the phone.

If Apple had any disappointments in the quarter, it would be in its iPod business, where sales of the music players fell 8 percent from the year-ago quarter to 10.2 million units. It was the second consecutive quarter where Apple saw iPod sales drop compared to the year before.

However, Apple sees cause for optimism in its iPod numbers. According to the company, 50 percent of recent iPod buyers were purchasing their first iPod. What's more, sales of the iPod touch doubled compared to the same quarter a year ago; Apple believes the recent price cut on the 8GB iPod touch (to $199) will attract even more buyers.

Numbers Don't Lie

As a result of those sales successes, Apple's 2009 quarterly profits rose by 46 percent compared to the same quarter in 2008, earnings per share rose by 44 percent, and revenue by 25 percent.

For the full 2009 fiscal year, Apple's revenue rose 12 precent while its income increased 18 percent from 2008, according to Chief Financial Officer Peter Oppenheimer. Those increases come during what he called "extraordinarily challenging times." Those challenges seem to have done little to slow the company down.

Swiss Hit: Apple's Overseas Success

The recession didn't stop at America's shores: The past year's economic meltdown has been felt worldwide. But, as in the United States, Apple doesn't seem to care.

Overlooked in the hubbub over Apple's record-setting Mac and iPhone sales and the company's recession-defying financial performance in the United States were the stellar numbers Apple turned in from overseas.

Take, for example, Europe. Apple brought in $2.49 billion in Europe. (To put that number in perspective, Apple posted $4.3 billion in sales in the Americas.) Revenue from Europe jumped 45 percent—double the rate in North and South America combined.

Switzerland provides a particularly interesting example of Apple's European success: With a market share of more than 30 percent, Apple is now number one in home computer sales; factor in business sales, and Apple is third overall, behind Hewlett-Packard and Acer.—**LEX FRIEDMAN**

DISC VERSUS DISK

You have questions about your Mac: Why is my Bluetooth keyboard always acting wonky? Why can't I sync to-do items between iCal and my iPhone? Why, for Pete's sake, do they love the Marker Felt font?

Apple doesn't seem to want to answer any of those questions. But it has cleared up another one that's baffled many a Mac user: What's the difference between *disc* and *disk*?

Perhaps you've always assumed that *discs* and *disks* are just variant spellings of the same word. Oh, how wrong you've been. In a new support-article/children's book, "What's the difference between a 'disc' and a 'disk'?" (support.apple.com/kb/HT2300), Apple's help-elves explain that *disc* refers to optical media—CDs, DVDs, and perhaps even someday things that go in Blu-ray drives. A *disk*, on the other hand, is a piece of magnetic media—like your computer's hard drive or a floppy disk.

How can you be sure to keep the two of them straight? I recommend the following mnemonic devices: *Disc* ends in a c. If you cup your hand in the shape of the letter C, it's the perfect grip for holding an optical disc. *Disk* ends in *k*, which is the symbol for the element potassium, which is in the same period on the periodic table as Iron (Fe), which is highly magnetic. See? Easy.

And remember: *Never* mix the two of these up while e-mailing anyone at Apple, else they mark the infraction in your permanent record.—**DAN MOREN**

Boot Camp Late to Windows 7 Party

As the rest of the world greets the release of Microsoft Windows 7, Mac users will need to wait a little longer. According to an Apple Support document (support.apple.com/kb/HT3920), the company will support Windows 7 Home Premium, Professional, and Ultimate in its Boot Camp software. But it appears that only users of Snow Leopard (which includes Boot Camp 3.0) will get official Apple drivers for the new Windows operating system. Apple has said those drivers should be available before the end of 2009.

Owners of some early-generation Intel Macs will be unable to get the required drivers at all. Apple's support document lists nine models in three different Mac lines (three iMacs, five MacBook Pros, and the original Mac Pro, all released in 2006) that "will not be supported for use with Windows 7 using Boot Camp." It's unclear why the nine models were excluded, though one could assume they contain some piece of hardware (perhaps a logic-board controller) that Apple chose not to support.

That said, I've been running a prerelease version of Windows 7 on my early-2006 Mac Pro with few problems. (It occasionally wakes from sleep for no reason.) On a brand-new 17-inch MacBook Pro, the Boot Camp drivers for Vista included with the Mac system discs installed flawlessly in Windows 7.—**DAVID CHARTIER**

Mac Port of ZFS Discontinued

By Jeff Porten

Bleeding-edge geeks are mourning the death of the project to implement the ZFS file system on the Mac. Apple recently discontinued the effort (apparently, according to Daring Fireball blogger—and *Macworld* contributor John Gruber, because of licensing issues [macworld.com/5501]).

File systems define the way computers read from and write to hard drives and other storage media. Most Mac-formatted disks use the Mac OS Extended format, also known as eHFS+ file system, which has been around since System 8.1. That replaced HFS (Hierarchical File System), which in turn replaced MFS (Macintosh File System). If you've ever attached a Windows-formatted drive to your Mac, you've probably also dealt with NTFS and FAT32.

HFS+ is getting a little creaky, compared to newer file systems. That's why there was some excitement when Apple expressed interest in ZFS as a possible successor. ZFS can do some amazing things. Attach a new terabyte drive to a ZFS system, for example, and you don't get a new, separate volume; instead, the terabyte is added to your existing volume. You can configure ZFS so that Time Machine–style backups can occur automatically, without requiring that you have any additional software.

ZFS
The Last Word in File Systems

Leopard had limited ZFS support (it could read ZFS disks). Some people were hoping for better support in Snow Leopard, but it didn't arrive. Now it looks like it never will.

Which is not to say we're stuck with HFS+ forever: Apple has reportedly been hiring file-system engineers.

EIGHT WAYS TO BECOME AN INTERNET PARIAH

By Christopher Breen

After years of moderating *Macworld*'s online forums, I'm still impressed with their overall civility. But I'm also dismayed by the occasional bozo who's intent on—and adept at—alienating everyone else. The tactics of these misanthropes are remarkably consistent. Unless you want to become an Internet pariah yourself, I suggest you avoid them.

1. Trolling Take up an unreasonable opposing position, just to get a rise out of people. It's most effective when you visit a site devoted to Subject A and then explain why everything about it stinks. Example: Drop by the Website of our sister publication *PC World* (www.pcworld.com) and loudly proclaim the superiority of Snow Leopard to Windows. Even if your comments are true, they won't promote productive or civil discourse.

2. Passionate Cluelessness OK, we get it, you have very strong views on politics, religion, and/or personal hygiene. But derailing a discussion about a new computer graphics chip to explain those views will not win people over to your point of view.

3. Dispassionate Cluelessness People in the *Macworld* forums are routinely generous when others ask for help. Don't abuse that generosity by following your first question with an endless series of follow-ups—particularly when you could easily find the answers yourself by taking a trip to Google.

4. Nitpick Nothing annoys a crowd like the grammar police—the people who derail discussions to correct the spelling and grammar of the other participants. Nitpick the content of an article or blog post. But don't correct our grammar.

5. Insult Calling another person a moron does not lead to a productive exchange of ideas. Really.

6. The "Nazi" Thing Online veteran Mike Godwin coined Godwin's Law: The longer an online discussion lasts, the more likely that someone will compare something (or someone else) to Hitler or Nazis. If you do it, you lose the debate.

7. Promote Yourself. Endlessly. Want to have your forum signature erased by forum hosts? Just keep putting up those links to whatever you're promoting, without adding anything worthwhile.

8. Hold a Grudge Remember that guy who called you a tool on AOL a decade ago? Wouldn't it be sweet to track him down on an Internet forum now and rip away at the old wounds? No, it wouldn't. It would just be kind of creepy.

Godwin's Law Online veteran Mike Godwin says: The longer an online debate lasts, the more likely that someone will invoke Nazis.

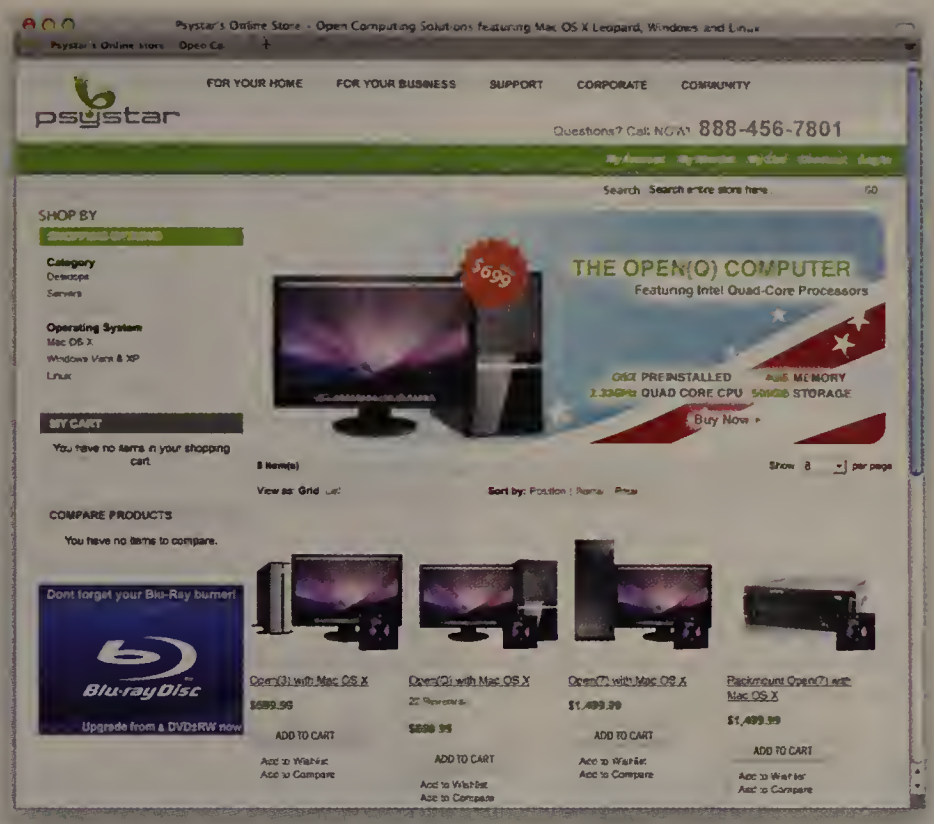
Macs: Current Lineup

PRODUCT	SPECS	RATING	PRICE	DISPLAY	SPEEDMARK 6*	FIND CODE
DESKTOP						
iMac	Intel Core 2 Duo/3.06GHz (nVidia GeForce 9400M)	●●●●	$1199	21.5 inches	148	5510
	Intel Core 2 Duo/3.06GHz (ATI Radeon HD 4670)	●●●●	$1499	21.5 inches	164	5509
	Intel Core 2 Duo/3.06GHz	●●●●	$1699	27 inches	162	5508
	Intel Core i5/3.06GHz	not yet rated	$1999	27 inches	not yet tested	5511
Mac Mini	Intel Core 2 Duo/2.26GHz, with 160GB hard drive (late 2009)	●●●●	$599	not included	104	5507
	Intel Core 2 Duo/2.53GHz, with 320GB hard drive (late 2009)	●●●●	$799	not included	118	5506
Mac Pro	Intel Xeon/ quad-core 2.66GHz	●●●●½	$2499	not included	348	4488
	Intel Xeon/ two quad-core 2.26GHz	●●●●	$3299	not included	343	4503
PORTABLE						
MacBook	Intel Core 2 Duo/ 2.26GHz (white)	●●●●	$999	13 inches	111	5505
MacBook Air	Intel Core 2 Duo/1.86GHz	●●●½	$1499	13 inches	156	4953
	Intel Core 2 Duo/2.13GHz	●●●½	$1799	13 inches	175	4954
MacBook Pro	Intel Core 2 Duo/2.26GHz	●●●●½	$1199	13 inches	213	4947
	Intel Core 2 Duo/2.53GHz	●●●●½	$1499	13 inches	239	4948
	Intel Core 2 Duo/2.53GHz	●●●●	$1699	15 inches	237	4949
	Intel Core 2 Duo/2.66GHz	●●●●	$1999	15 inches	242	4950
	Intel Core 2 Duo/2.8GHz	●●●●	$2299	15 inches	260	4951
	Intel Core 2 Duo/2.8GHz	●●●●	$2499	17 inches	256	4952

* Speedmark 5 is Macworld Lab's standard test tool for benchmarking systems running Mac OS X 10.5 (Leopard). For more information on Speedmark testing, go to www.macworld.com/speedmark.

Psystar: They're Ba-ack!

By Nicholas Bonsack



Psystar—the company that made a splash last year by trying to sell a Mac clone—is back at it. Determined to keep the dream of Macs-that-aren't-from-Apple alive (pesky EULAs—end-user licence agreements—be damned), the company is now selling Rebel EFI (macworld.com/5497), software that's available exclusively from Psystar's online store. The company says that the product enables you to run up to six operating systems—including Mac OS X Snow Leopard—on six different hard drives on the same computer.

Psystar's Website claims that Rebel EFI uses the company's own Darwin Universal Boot Loader to load Mac OS X. Psystar's Website provides instructions on installing Snow Leopard on Rebel EFI (macworld.com/5499), as well as a list of compatible hardware.

But if you're brave enough to give Rebel EFI a try, you're really on your own. Psystar's fine print asserts that the company is "not responsible for possible data loss due to installation or use of Rebel EFI."

Rebel EFI is being offered now for $50, down from the "regular" price of $90. A trial version will let you use Rebel EFI with limited functionality for up to two hours, but we truly have no idea what will happen after that.

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Note the right (R) and left (L) earphones and insert into the correct ear. Secure the cables using the adjustment tube.

Insert the Earphones
Pull your ear upward and outward to straighten out the ear canal. If using foam sleeves, gently compress the foam with your fingers and insert the earphone.

Create a Personal Fit
The sleeves must create a good seal to get the best sound quality. Try the various sleeve size options to find a comfortable fit.

Connect To Listening Devices Carefully
Turn down the volume of your listening device. Connect the plug from your earphones into the device's output jack. Insert earphones into your ears using suggested fit techniques. Slowly raise the volume to a comfortable listening level.

Maintaining Your Earphones
Clean your sleeves periodically. Avoid getting moisture in the nozzle, and do not strike or drop the unit. Clean the nozzles using the wax removal tool when buildup is noticeable.

SHURE
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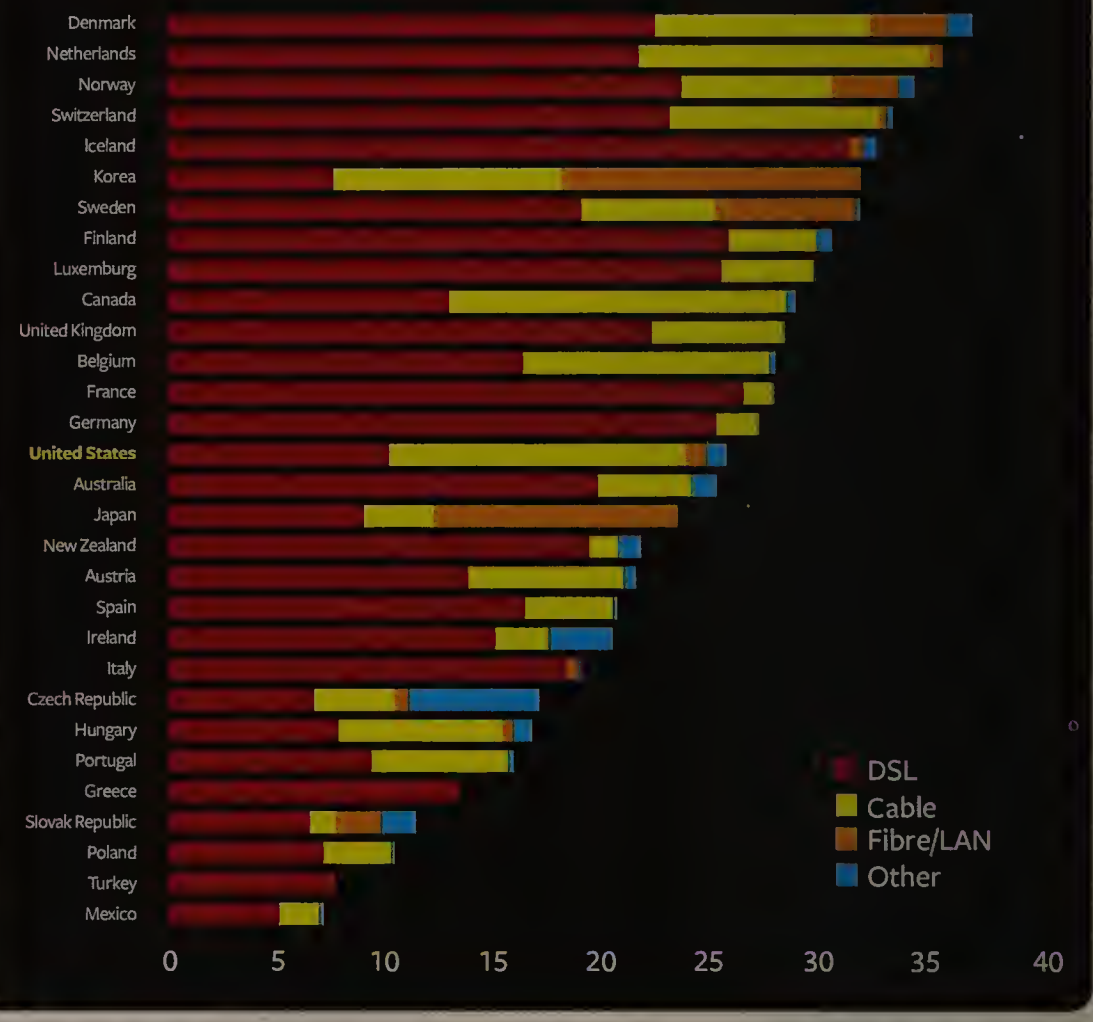
U.S. BROADBAND: MORE MIDDLING THAN FAIR

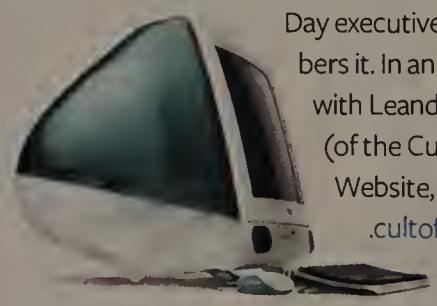
According to a recent study by the Organisation for Economic Co-operation and Development (OECD), the United States falls squarely in the middle of the global pack when it comes to broadband. For example, compared with the other 30 countries in the OECD (which includes most of Europe, Canada, Japan, Korea, and other free-market–friendly nations), the United States is 15th in terms of broadband subscribers per 100 inhabitants. Its rankings in measures of broadband speeds and pricing were similarly so-so.—**JEFF PORTEN**

United States Lags on Broadband



Jobs Hated the Name 'iMac'?

Were it not for Ken Segall, you might be going to the Apple Store to buy the new 27-inch FlatMac. Instead, Segall's team convinced a reluctant Steve Jobs to go with the name "iMac"...and the rest is history. At least that's the way Segall, a former TBWA\Chiat\Day executive, remembers it. In an interview with Leander Kahney (of the Cult of Mac Website, www.cultofmac.com), he says that Jobs unveiled the first Bondi Blue iMac for the TBWA team and asked them to come up with a name quickly—the boxes had to be printed within a week.



Segall's team came back with five names, but four were ringers for the one he liked best: iMac. He says that Jobs rejected the iMac name at first, but changed his mind when he modeled what it would look like engraved on the side of the computer. Segall also says that Jobs had an idea for the name himself, but it was, in Segall's words, "blood-curdling."—**JEFF PORTEN**

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LEGENDARY PERFORMANCE

Mac Gems

DISCOVER GREAT, LOW-COST MAC PRODUCTS **BY DAN FRAKES**

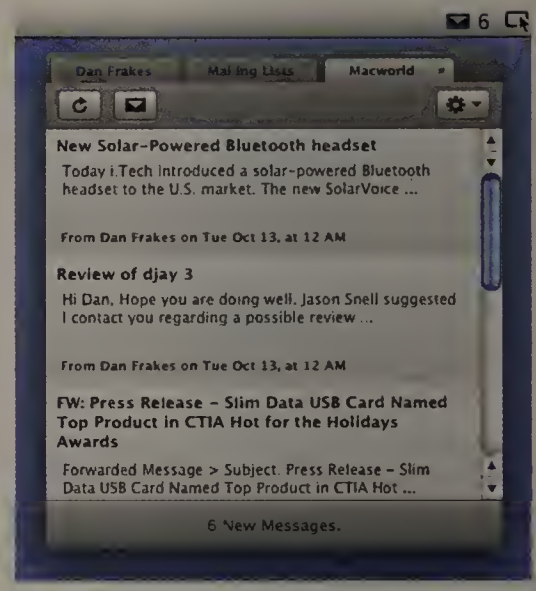
Bevy 1.0.4

UTILITIES Many Mac users, dissatisfied with the Dock and Spotlight, turn to third-party utilities to launch programs. While many of those utilities are keyboard- or menu-based, Bevy is a launcher for the visually inclined. Press a keyboard shortcut, or click Bevy's menu-bar icon, and the utility pops up a graphical display of all the applications on your Mac, with any currently running programs highlighted. Click a program's icon to launch (or switch to) the application. Don't recognize an icon? Bevy displays the name of each item as you mouse over it. It's a fun approach to working with applications, and I've found that it also helps me rediscover stuff I'd forgotten I had installed.

Hold down a letter on your keyboard to highlight only the programs whose name starts with that letter (or includes it as a capital letter). But perhaps what I like most is that dragging a document into Bevy's display highlights all the programs that can open the file; simply drop the document onto a program's icon to open the file.

If you have so many applications installed that the default view is too cluttered, you can exclude particular programs (though you must exclude each program separately; there's no way to exclude apps en masse). You can also arrange applications in folders and tell Bevy to display programs by folder; each folder is presented in a separate section of Bevy's display.

★★★½; $10; Berg Design; macworld.com/5420

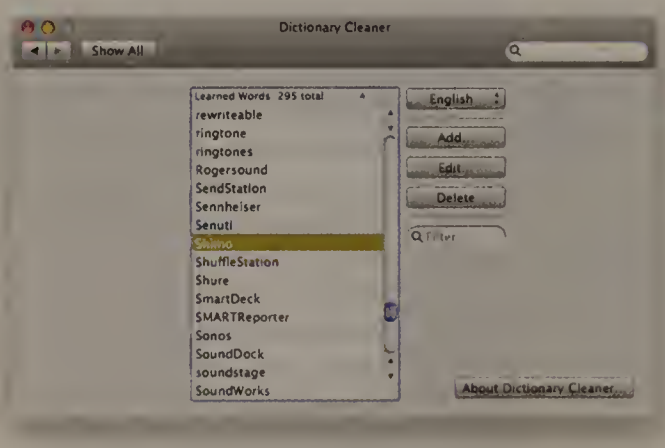


Notify 1.0.5

E-MAIL Checking in on your Gmail account can be a hassle if you don't access it from a dedicated e-mail client. Notify is an elegant utility that sits unobtrusively in your menu bar and periodically checks for new messages. When new mail arrives, Notify informs you via either the menu bar or Growl notifications. Click on the menu for a preview of each new message; double-click on a message to view it in Gmail in your Web browser. Once a message is marked as read, it's removed from Notify.

You can add up to four Gmail accounts to Notify; each one gets a separate tab in Notify's interface. Because of the technology that Notify uses to interact with Google, the program shows only a short preview of the 20 newest unread messages, but it's still a handy way to keep an eye on your Gmail account.

★★★½; free; Vibealicious; macworld.com/5425

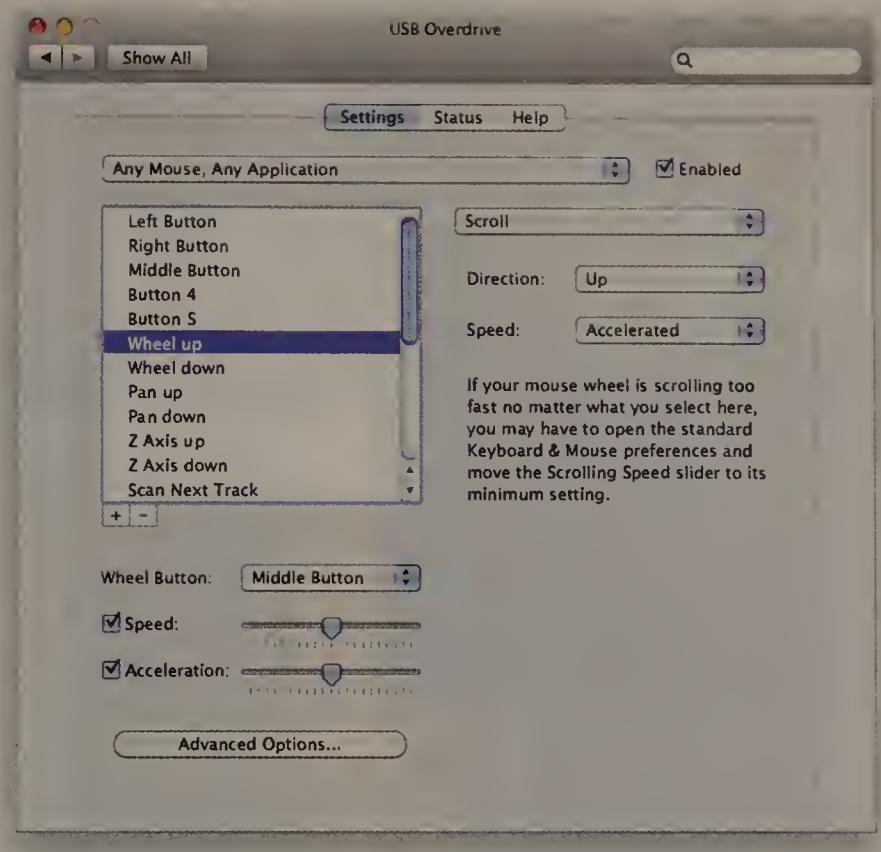


Dictionary Cleaner 1.5

PRODUCTIVITY Mac OS X's built-in spelling checker lets you add words to its dictionaries so they won't be flagged as incorrect in the future. But once you've added words, there's no way to edit those additions. Dictionary Cleaner, a third-party system preference pane, shows a sorted list of all words you've added and lets you edit or delete any of them. You can also add new words directly from within Dictionary Cleaner. (Unfortunately, you can't import a list of words; you must type each manually.) Dictionary Cleaner is easy to use and fills an obvious hole in OS X's feature set.

★★★½; free; Two AM Software; macworld.com/5422

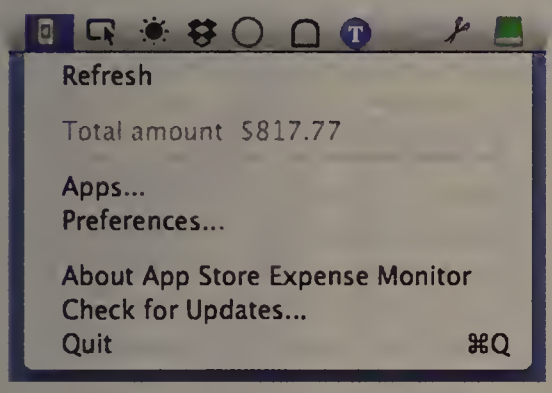
USB Overdrive 3.0.1



UTILITIES USB Overdrive has long let Mac users customize their USB input devices (and, more recently, Bluetooth mice) with more and finer-grained options than the software included with those peripherals; it even works with many devices that don't officially support the Mac. For mice, USB Overdrive lets you assign any button as a single, double, left, right, or modifier-key click, and you can customize scrolling speed and acceleration. For mice and keyboards, you can also assign to buttons and keys—including special media and function keys—actions such as entering key combinations, activating system controls, launching applications, opening files or folders, executing AppleScripts, and more. You can even make peripherals work differently in different applications.

Some keyboard vendors use nonstandard codes for keyboard buttons, so not all keyboards are supported. And USB Overdrive's interface can be a little tricky to figure out. But the software offers Mac users sophisticated button control that can reduce clicks and speed up productivity.—**JONATHAN SEFF**

★★★★; $20; Alessandro Levi Montalcini; macworld.com/5421



App Store Expense Monitor 1.1.3

iPHONE The iPhone's App Store makes purchasing so simple, it's easy to lose track of how much you've spent. App Store Expense Monitor reports the approximate sum of all your App Store purchases. It also provides a sortable table of your apps that includes the developer, the App Store category, and the current price. You can export the table to a character-delimited file.

★★★; free; WetFish Software; macworld.com/5424

Go to Weblog

Read Mac Gems online (macworld.com/macgems) for longer reviews of these and other products.

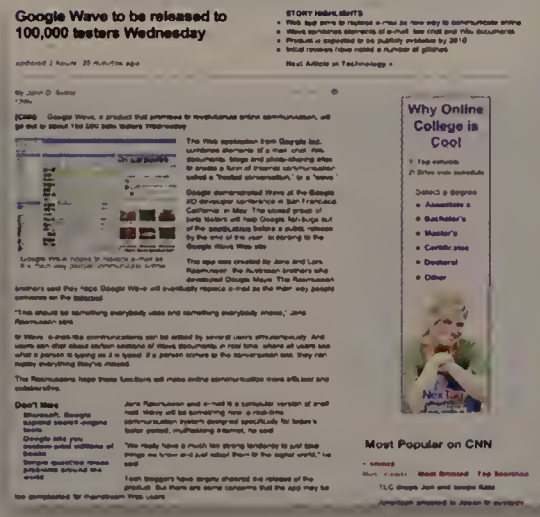
Readability

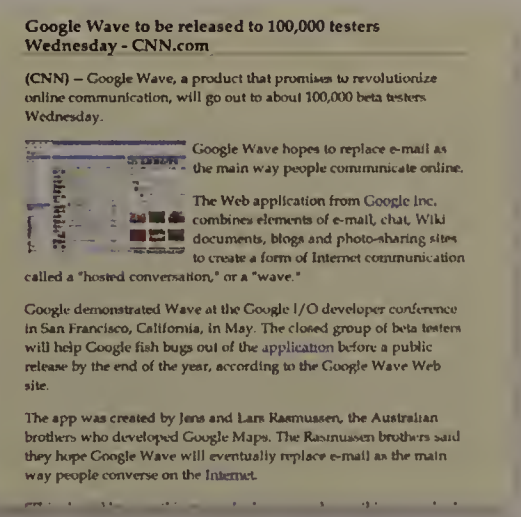
WEB As Websites have gotten more and more complex, many Web pages have become more and more difficult to read. So I'm a big fan of programs and services that make the Web more readable. Readability—which, unlike most Gems, isn't a program you download to your Mac, but rather an online service—is a bookmarklet-based tool, designed for Safari and Firefox, that reformats a Web page and presents the page's main content in a plain, easy-to-read layout.

To set up Readability, you go to the Readability Web page and choose your settings: You get four choices each for layout style, font size, and margin width; a live preview shows each setting in action. Then you drag the Readability bookmark from the Web page into the Bookmarks Bar in your browser. From that point on, whenever you're viewing a page you want to make more readable, you simply click the Readability bookmarklet in your Bookmarks Bar; the page is immediately transformed into clean, neatly formatted text.

Readability has a few limitations: It shows only the first page of a multipage article; you should switch to an article's single-page or print view, if available, before using Readability. And it also occasionally misidentifies some images and bits of text as nonarticle content, omitting that content from the reformatted page. Still, this is one of my favorite Web tools.

★★★★; free; Arc90; macworld.com/5423





Macworld Hot Stuff

WHAT WE'RE RAVING ABOUT THIS MONTH

Free Holiday Wi-Fi

Virgin America and Google are teaming up to make holiday traveling more bearable. The search giant is subsidizing free in-flight Wi-Fi service on the airline for the holiday season, from November 10 through January 15. That isn't necessarily a huge discount—the usual pricing for in-flight Wi-Fi on Virgin is $6 to $13 per flight for laptops, and $6 to $8 for handheld devices. But the partnership is a good match: Virgin America is a budget airline, with many of its coast-to-coast flights costing just $100 each way; this is just one more way for cost-conscious fliers to stretch their travel dollars. The service works on any Wi-Fi–enabled device, and there's live, in-flight customer support via Google Chat. To get the service, you simply supply an e-mail address and complete a CAPTCHA (www.captcha.net). Even better: Each Virgin America jet provides power outlets at every seat. You can get more information about the free offer at Google's Free Holiday Wi-Fi site (www.freeholidaywifi.com).—**JEFF PORTEN**

HyperMac

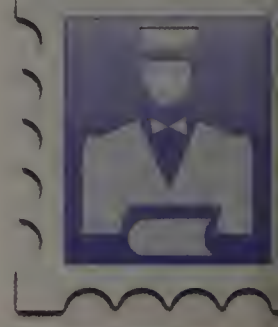
We could all use a little more stamina. Too bad there aren't cardio workouts for laptop batteries. If you want to improve your MacBook battery's staying power, consider Sanho Electronics' new HyperMac external power packs. Billed as the world's first universal power solution for MacBooks, the HyperMac battery comes in four capacities: 60 watt hours ($200), 100 watt hours ($300), 150 watt hours ($400), and 222 watt hours ($500). Each power pack comes with a cable for connecting to the MacBook's MagSafe charging port (you can choose a standard connector or the MacBook Air version). They also include a battery indicator and a USB port so you can charge other devices simultaneously. The HyperMac models weigh between 0.8 pound for the 60-watt-hour model to a hefty 4.7 pounds for the 222-watt-hour version (www.hypershop.com).—**DAN MOREN**

Stomp

Stomp is a video-conversion and -compression utility that features a variety of video superpowers, including presets for the Apple TV, YouTube, and the iPod; an informative video queue for batch operations; and a lot of customizable functions such as cropping and resizing. Stomp can compress or convert audio files in addition to video. It has a Photoshop-worthy list of filters and effects from Mac OS X's Core Image library that let you adjust color, or add blur and other effects. A demo (which watermarks exported video) is available for free; a license costs $30 (macworld.com/5497).—**DAVID CHARTIER**

Herald

Developer Erik Hinterbichler's Herald (payment requested) is a handy Mail utility that notifies you (in great detail) when you receive new e-mail messages. A translucent alert window shows you the header and body of the message; you can scroll through the entire contents (no matter how long). Action buttons allow you to delete, view, or mark the message as read. You can specify which mailboxes trigger notifications and adjust the notification's appearance (erikhinterbichler.com).—**DERIK DELONG**



LIGHTROOM 3 PUBLIC BETA

Adobe recently released a public beta of Lightroom 3, the next version of its professional photo-management and -processing application. According to Adobe, it has reworked Lightroom to make the app better at dealing with large libraries. It also offers better noise reduction, which improves photos taken at high ISO settings. Included are a new watermarking tool, more options for creating print packages, a film-grain–simulation tool, better importing, and better support for publishing images online. A free trial version is available for download through April 30, 2010 (labs.adobe.com).—**AAYUSH ARYA**

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NEW RULES FOR FREE APPS

Is this the end of the truly free App Store app?

By Rob Griffiths

Apple has changed the rules regarding in-app purchases for apps sold through the App Store. Previously, in-app purchases were restricted to paid apps, but now developers of free applications can take advantage of in-app purchases as well. This is good news not only for developers, but also for consumers.

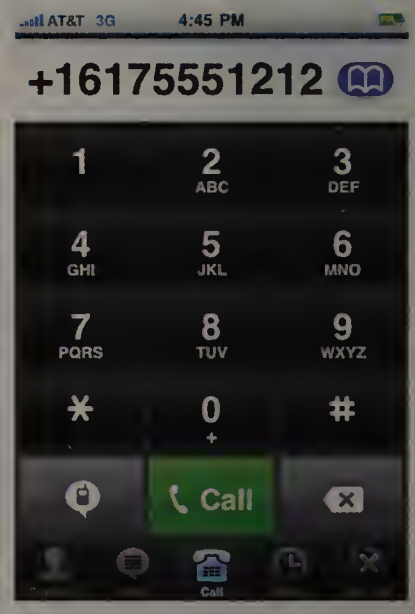
Many developers create free "lite" versions of their programs, to get people interested in the full versions. Because of the restrictions on in-app purchases, upgrading from a free version to a full one hasn't been as easy as it should be. You've had to buy the full app in the App Store and then remove the lite version from your device. You've then had to rearrange the program icons. And in most cases, work you'd done in the trial version was lost.

With Apple's change in policy, a developer could build a free app that demonstrates some of a program's features; the rest of its features would be unlocked when the user made an in-app purchase. For example, the first three levels of a game could be free, but the remaining 97 would become available only when the user paid. Managing a single app is much easier than managing two: Bug fixes and new features need to be added to just one code base, only one app has to be uploaded to the App Store, and Apple only has to approve one version of the program.

Developers who want to create subscription-based apps could also benefit from the change. Previously, developers had to sell their program for at least a token amount so that they could offer subscriptions through in-app purchasing. Even a small price, though, might dissuade potential buyers. With the policy change, those developers could distribute subscription-based apps for free and still use in-app purchasing to sell the subscription content.

This change has benefits for users, too. You'll be able to download just one app instead of managing a lite and a paid version, as noted earlier. Searching the App Store will also be easier. Until now, when you looked for an app by name, you often got multiple results, such as *Some App* and *Some App Lite*. With this new policy, you'll simply get *Some App*.

It will be interesting to see if this change helps drive prices down even further in the App Store. The question is whether a developer can drive more demand (and eventually revenue) from a "free" version of an app that has some locked-off functionality than it can from two separate applications—a paid one that's full featured and a permanently feature-limited free one. If developers think "free plus in-app purchasing" will drive more revenue, then we will eventually see even more "free" apps appearing on the App Store. As a consumer, I prefer the easier app management that comes with this change, but it will be the developers who determine which types of applications we'll see going forward.



AT&T Changes Stance on VoIP Apps

By Dan Moren

That sound you heard in early October was AT&T slamming itself into reverse and announcing plans to allow Internet phone applications such as Skype to place calls via the iPhone's cellular data connection. That's a dramatic change from the wireless carrier's previous stance, which relegated Voice-over IP (VoIP) applications such as Skype and Fring to doing their business over Wi-Fi.

While some observers had alleged that AT&T wanted to bar Skype from its data network to stifle competition and to force customers to use the company's international calling options, it's also been suggested that AT&T was worried that Internet calling on the immensely popular iPhone would overburden its network.

AT&T's new policy apparently does not open the door to other restricted applications, such as SlingPlayer Mobile (which allows users to stream video from their home devices); right now, that service works only over Wi-Fi connections. Nor does it affect Google Voice, which uses the standard telephone functions of the cellular network to route phone calls to and from users.

TWEETIE 2 PRICING FUSS REVEALS APP STORE FLAW

By Dan Moren

Tweetie 2 (macworld.com/5459) arrived in the App Store with a feature list as long as your arm. Yet all anybody wanted to talk about was the upgrade pricing for the mobile Twitter client.

Instead of offering the updated version for free, developer Loren Brichter is charging $3. He argues that Tweetie 2 is an entirely new application, rebuilt from the ground up with new features and functionality. That argument hasn't swayed some bloggers, who blasted Brichter for what they see as moneygrubbing.

I don't share their outrage. Brichter is not a bazillionaire. He's just one guy who created an excellent Twitter app for the iPhone (which he later ported to the Mac). He's simply trying to make a living creating software. That isn't easy, especially in a market as crowded as the one for iPhone apps. Brichter's charging a reasonable amount of money for a product into which he's invested his time and energy.

The problem here is that upgraders have to pay the same price as new buyers. For that, I'd blame the App Store itself and its "no paid updates" rule. The policy is an all-or-nothing proposition: Either upgraded versions of an application are available to everyone for free, or the upgrade must be considered a "new" application, for which everybody has to pay the same price. It's a fundamental flaw in the App Store's design.

I asked Brichter via e-mail whether he'd be interested in upgrade pricing in the App Store. "Absolutely, absolutely, absolutely," he wrote back. "In an ideal world, I'd be able to graduate the price depending on duration of ownership, so users who picked up Tweetie 1 recently could get 2.0 for free."

From his mouth to Apple's ears.

iPhones: Current Lineup

PRODUCT	SPECS	RATING	PRICE [A]	DISPLAY	PERFORMANCE	FIND CODE [B]
iPhone 3G and 3GS	8GB (3G)	★★★★	$99	3.5-inch color	5 hours of 3G Internet; 5 hours of 3G talk time	4184
	16GB (3GS)	★★★★½	$199	3.5-inch color	9 hours of 3G Internet; 5 hours of 3G talk time	4955
	32GB (3GS)	★★★★½	$299	3.5-inch color	9 hours of 3G Internet; 5 hours of 3G talk time	4956
iPod Touch	8GB	★★★★	$199	3.5-inch color	36 hours of music playback; 6 hours of video playback	3864
	32GB	★★★★½	$299	3.5-inch color	36 hours of music playback; 6 hours of video playback	5257
	64GB	★★★★½	$399	3.5-inch color	36 hours of music playback; 6 hours of video playback	5258

[A] All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. [B] In a browser's address field, typing a find code after *macworld.com/* takes you to a product's review or overview.

Photoshop Goes Mobile

By Dan Moren

For people who like to edit and show off their photos on the go, Adobe has released Photoshop.com Mobile for the iPhone (★★★½; macworld.com/5460). The app (which, naturally, works on the iPod touch, too) allows you to edit images stored on your mobile device, and lets you work with the company's Photoshop.com online photo-storage site from wherever you can get a mobile data connection.

While the free iPhone app obviously won't give you the full powers of the Mac version of Photoshop, it will let you adjust exposure, saturation, tint, and other image settings on your iPhone photos. You can also crop, rotate, and flip images, or apply effects such as Pop, Vignette Blur, Warm Vintage, and Soft Black And White. There are even multiple levels of undo and redo.

When you've tweaked your photo to your satisfaction, you can upload the edited version to your Photoshop.com account. (You don't need an account to use the iPhone app, but if you want one, Photoshop.com offers free 2GB accounts.) You can also view other pictures you've saved there.

App Guide

iPHONE AND iPOD TOUCH SOFTWARE THAT'S CAUGHT OUR EYE

Toy Story Mania

GAMES Based on a Disney theme-park ride, this game puts the *Toy Story* characters in a collection of five carnival-themed mini games in which you shoot at targets with eggs, darts, rings, and pop guns to win tickets that unlock prizes. Each of the five games has its own distinct theme—Woody runs a western shooting gallery, while Buzz Lightyear mans a space-age ring toss—and each has a unique set of controls that adds to Toy Story Mania's versatility and replayability. Three different levels—easy, normal, and hard—and different modes of play keep things lively. In the parlance of the midway, it's fun for children of all ages.—**PHILIP MICHAELS**

4 stars; $5; Walt Disney; macworld.com/5407

OpenTable 2.0.1

LIFESTYLE Just as the OpenTable.com Website turns making restaurant reservations from a cumbersome chore into a quickly disposed of to-do item, its mobile version is a worthwhile app for the on-the-go gourmand. With just a touch or two, the app presents you with nearby restaurants and their available seating. From there, it's just a matter of using your OpenTable account to finalize your reservation.—**JEFFREY HATTON**

4½ stars; free; OpenTable; macworld.com/5405

JR Hexatone Pro 1.1

MUSIC You'll definitely encounter a learning curve with this rhythm sequencer, which gets its name from Dream Theater keyboardist Jordan Rudess and the hexagonal shapes you use to create music. But once you figure out the basics, JR Hexatone quickly becomes remarkably useful. Each hexagon holds instructions explaining what to do with a music sample—you have 90 hexagons that you can use to create and control drum patterns for amazingly complex beats. Spend some quality time with JR Hexatone, and you'll soon realize that it's one of the best music-making apps on the iPhone.—**JOHN BRANDON**

4 stars; $10; Amidio; macworld.com/5412

TOP APPS

Music Makers

8Bitone Micro Composer
4½ stars Pack an old-school synthesizer into your iPhone (macworld.com/5414).

We also like:

BeBot—Robot Synth
4½ stars macworld.com/4985

iShred: Guitar + Effects
4½ stars macworld.com/4900

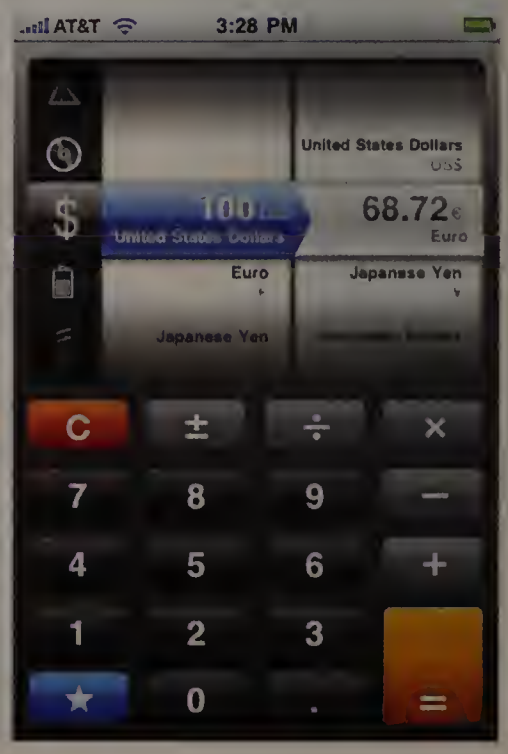
Ocarina
4½ stars macworld.com/4269

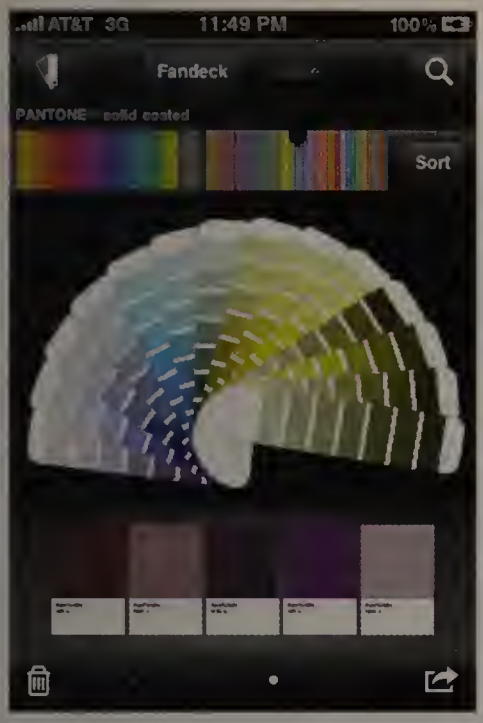
Find more great music apps for your iPhone at macworld.com/5461.

Convert 1.0.1

UTILITIES A beautiful-looking app, Convert measures up well against rival conversion utilities in the App Store. With its spin-wheel interface, Convert offers you 15 different types of unit conversions, from basics like area, angle, weight, volume, length, and temperature, to the more technical such as energy, currency, force, pressure, power, and typography; it also includes a basic built-in calculator to help you with conversions. This app doesn't offer some of the features of the also-impressive Convertbot (4½ stars; macworld.com/5409), but Convert has enough unique capabilities of its own to make it well worth your while.—**JEFFERY BATTERSBY**

3½ stars; $2; Tap Tap Tap; macworld.com/5408





myPantone

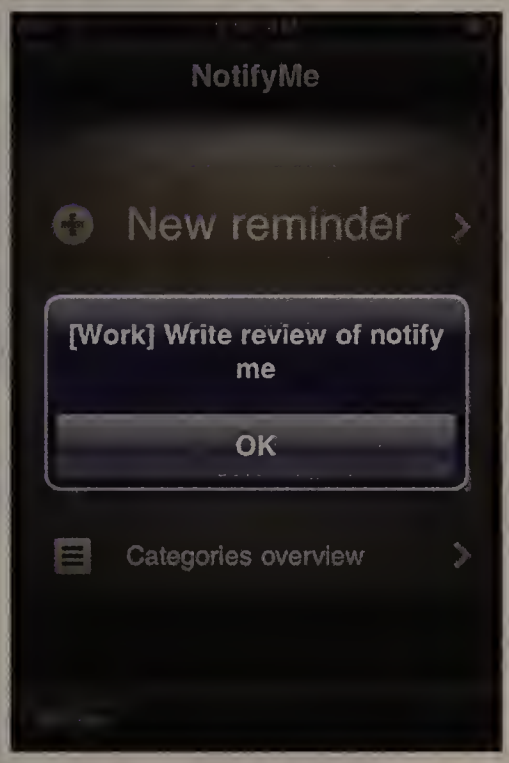
REFERENCE The myPantone iPhone app won't replace sophisticated color-calibration hardware or even a run-of-the-mill fan deck (and app developer Pantone doesn't claim that it will). Instead, myPantone puts an elaborate cross-referencing system for Pantone's major color libraries in your pocket, allowing you to identify colors and experiment with color groups when you're on the go. Despite some small interface flaws and the obvious limitation of relying on an iPhone to accurately gauge color, designers who work with color can benefit tremendously from such an informative app.—**JACKIE DOVE**

●●●●; $10; Pantone; macworld.com/5410

NotifyMe 1.4.1

PRODUCTIVITY PoweryBase's to-do–list manager, NotifyMe, takes advantage of push notifications to remind you when it's time to get stuff done. It doesn't try to compete with more full-featured task managers; instead, NotifyMe shines in its simplicity, using a minimal, though polished, interface to its advantage. The app works best when it comes to reminding you of the mundane to-dos you need to take care of throughout the day, as opposed to managing complex tasks and projects. Type in a reminder, choose a category, and set the due date—at the appointed time, NotifyMe will send you an alert about the task at hand.—**LEX FRIEDMAN**

●●●●; $4; PoweryBase; macworld.com/5406



ESSENTIAL APPS

War Games

War! What is it good for? Absolutely nothing—but these combat games are exciting (macworld.com/5413).

Fieldrunners ●●●●½ The tower-defense genre gets redefined in this stellar game.

iFighter ●●●●½ Take to the skies in this WWII-era scrolling shooter.

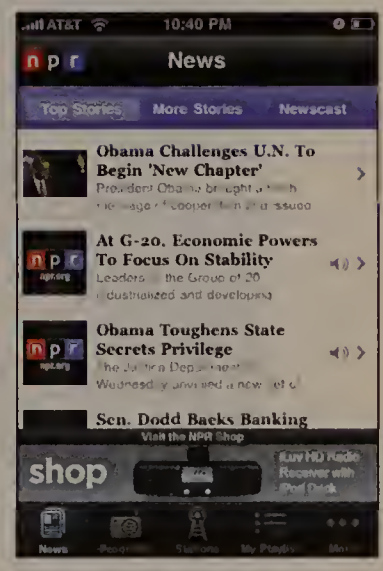
Modern Combat: Sandstorm ●●●● Finally—a compelling first-person shooter for the iPhone.

Hellfire ●●●½ Blast the bad guys from your chopper.

NPR News 1.2.1

AUDIO NPR has done a great job of meshing online content with its on-air material to create a full-featured iPhone news app, which will be familiar territory for frequent visitors of the broadcaster's Website. A main screen presents multiple categories for browsing the news, and you get full access to NPR's regular programming. You're able to share stories via e-mail, Twitter, or Facebook, and a recent update added live coverage of breaking news.—**ROB DE LA CRETAZ**

●●●●; free; NPR; macworld.com/5411



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APPLICATION	DESCRIPTION	PRICE	RATING	FIND CODE*
Birdbrain 1.5 XK72	Twitter stats tracker	$2	●●●●½	5415
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Top Shelf Drinks 2.1 .1 Affogato	cocktail recipes	$2	●●●●	5418
Worms 1.0.2 Team 17 Software	game	$5	●●●½	5419

* Typing a find code after *macworld.com/* in your browser's address field directs you to a product's review or overview. For example, macworld.com/5415 takes you to our review of Birdbrain.

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PHOTOGRAPH BY PETER BELANGER

Widescreen Wonders

Putting together your holiday wish list? Apple is hoping a sparkling new Mac is at the top of it. As an incentive for you to get a new Mac, Apple updated its consumer-level Mac products—the MacBook, iMac, and Mac mini—on October 20, 2009, with new designs, faster processors, and more features. The MacBook has a new unibody case to make the laptop thinner and a little lighter. The three new iMac models have bigger widescreen displays to be better suited for high-definition video. And the two Mac mini models are faster than their predecessors while maintaining their low price. *Macworld* tested each new machine, and in the following pages are the results and our recommendations. Now all you have to do is remember to not be naughty and just be nice.

Apple supersizes the iMac lineup. **Plus:** New Mac minis, MacBook & more.

iMac

Apple's all-in-one computer goes widescreen

BY ROMAN LOYOLA

Featuring bigger, better screens and shiny new mice, the aluminum iMac sports the most dramatic changes to the consumer desktop since it was introduced over two years ago. The new iMacs are currently available in three standard configurations. The entry-level $1199 iMac and the $1499 iMac both feature 21.5-inch displays and 3.06GHz Core 2 Duo processors; these models replace the 20-inch iMac (4½; macworld.com/4500) released in early 2009. The new 27-inch model ($1699) has a 3.06GHz processor as well. Apple also announced another 27-inch iMac with a 2.66GHz Intel Core i5 processor that sells for $1999, but it wasn't available in time for this review. The 27-inch models replace the 24-inch iMacs (4; macworld.com/4500).

Ratio Redo

Replacing the previous 20- and 24-inch screens, which had a 16:10 aspect ratio, are 21.5- and 27-inch displays at 16:9—more suitable for widescreen HDTV video. The 21.5-inch display has a native resolution of 1920 by 1080, while the 27-inch display's resolution is 2560 by 1440.

The LED backlit screens on both the 21.5- and 27-inch iMacs are a bit brighter than their predecessors. On the 21.5-inch iMac, you'll notice that its colors are much better than on the 20-inch iMac. That's because Apple thankfully now uses 8-bit displays across the iMac line—the 6-bit dithered display used in the 20-inch iMac is long gone (we hope).

Both displays also use in-plane switching (IPS) technology, which is supposed to help maintain image quality when you look at the screen from extreme angles. Looking at the new iMacs from different angles, I had a difficult time noticing any color shifting.

There's one major issue with the screen that, for many, is a deal-breaker: the glass on the display and its glossy effect. The glossy effect makes colors pop and blacks deep and rich, but you can see your reflection in the glass. I've learned how to see past the glare and reflections, but many others cannot develop such tolerance—and I'm not saying you should. But it's now been two years since the first aluminum iMac with glass was introduced, and chances are Apple is not going to make an iMac with a matte screen, at least not with this current design.

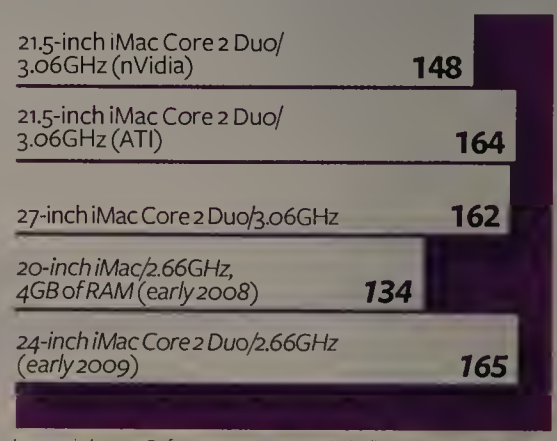
Go Inside

All three of the new iMacs use 3.06GHz Core 2 Duo processors with 3MB of shared Level 2 cache. You can upgrade any of the three models to a 3.33GHz Core 2 Duo processor with 6MB of shared L2 cache for an extra $200. The previous iMacs used Core 2 Duo processors at 2.66GHz, 2.93GHz, and 3.06GHz, but with 6MB of shared L2 cache.

The new iMacs come standard with 4GB of RAM, installed as a pair of 2GB 1066MHz DDR3 SO-DIMMs, and have four memory slots; Apple actually leaves two slots open so you can add more RAM without having to replace the stock memory—a nice touch. The iMac can support up to 16GB of RAM, and you can easily install RAM yourself in

Macworld Lab Test

Speedmark 6 Test Results



Longer is better. Reference systems are in *italics*. Speedmark 6 scores are relative to those of a 1.5GHz Core 2 Duo Mac mini, which is assigned a score of 100. All systems were running Mac OS X 10.6.1, with 4GB of RAM.—MACWORLD LAB TESTING BY JAMES GALBRAITH, CHRIS HOLT, ROMAN LOYOLA, AND HELEN WILLIAMSON

For complete benchmark test results, please visit macworld.com/ **5503**

PHOTOGRAPH COURTESY OF APPLE

Use the New iMac as an External Display

The 27-inch iMac's Mini DisplayPort has a very interesting new feature: a video-in mode. So now you can connect an external video source, such as a MacBook, a Blu-ray player, or even a PlayStation 3, and use the 27-inch iMac as a monitor. According to Apple representatives, the computer is still on when it's in this mode, and you can press ⌘-F2 on your keyboard to switch between the computer and the external video source. Apple also says that you can connect a video source while the iMac is on, so there's no need to shut down. To use the 27-inch iMac's video-in capability, you need to have either a DisplayPort-compliant source like a MacBook, or an adapter for a non-DisplayPort device, such as an HDMI-to-Mini DisplayPort video-in adapter. However, Apple says that it has no plans to produce such adapters, leaving it up to third-party manufacturers.

the RAM slots located at the bottom of the screen.

The $1199 21.5-inch iMac has an nVidia GeForce 9400M graphics card, which uses 256MB of memory that's shared with the main memory. Both the $1499 21.5-inch iMac and the $1699 27-inch iMac use an ATI Radeon HD 4670 with 256MB of its own dedicated video RAM.

All of the new iMacs have 7200-rpm hard drives. The $1199 iMac has a 500GB drive, while the other two iMacs each have a 1TB drive. All of the iMacs have SuperDrives, and next to the SuperDrive slot is a new SD card slot that can read SD and SDHC memory cards.

Ports, Video In, and More

The ports are located on the back of the iMac, on the lower left side. There are digital/analog audio input and output minijacks, four USB 2.0 ports, one FireWire 800 port, a Mini DisplayPort, and a gigabit ethernet port.

Apple upgraded the iMac's speaker system, and the new speakers are a vast improvement, producing richer sound with better bass response and louder volume. However, you'll want to use external speakers to fill a room larger than 20 by 20 feet.

The iMacs come standard with an iSight camera, Wi-Fi, and Bluetooth. Apple includes a new version of the Wireless Keyboard, which now uses two AA batteries instead of the three AA batteries its predecessor required. Apple also includes the new Magic Mouse (see "Magic Mouse," page 38).

Performance

You'd think that the new iMacs would achieve similar Speedmark 6 scores, but the graphics cards in the iMacs influence performance. The $1199 21.5-inch iMac, with its nVidia GeForce 9400M integrated graphics chip, posted the lowest Speedmark score of the new iMacs. The $1499 21.5-inch iMac and the $1699 27-inch iMac each have an ATI Radeon HD 4670 graphics card with its own 256MB of video RAM, and both models posted similar Speedmark scores.

When compared to older iMacs, the new iMacs offer a nice speed increase. The $1199 3.06GHz 21.5-inch iMac has a Speedmark score that's 14 points higher than that of the 2.66GHz 24-inch iMac Core 2 Duo, which was $1499 at its release in early 2009. The 27-inch iMac's Speedmark score is 3 points lower than that of the 3.06GHz 24-inch iMac, the previous high-end iMac—an insignificant difference that you won't notice.

Macworld's Buying Advice

There's plenty to like about the new iMacs. The $1199 21.5-inch iMac is a very good deal, but you'll get more storage space and better graphics performance if you step up to the $1499 21-inch iMac. The $1699 27-inch iMac can do double duty as part of a home entertainment center for watching videos. If you want the very best performance and you don't want to wait, the ATI-equipped iMacs are the ones to get. But you should also take a look at the $1999 27-inch Intel i5-based iMac—we'll have a full review of this iMac on our Website as soon as we get our hands on one.

Roman Loyola is a *Macworld* senior editor.

3.06GHz 21.5-Inch iMac Core 2 Duo (nVidia GeForce 9400M)

PROS: Display has impressive image quality from any angle; improved speaker system; new SD card slot.

CONS: Glossy screen may frustrate some users; FireWire 400 peripherals require an adapter; Apple Remote not included.

PRICE: $1199

COMPANY: Apple, www.apple.com

FULL REVIEW: macworld.com/5482

3.06GHz 21.5-Inch iMac Core 2 Duo (ATI Radeon HD 4670)

PROS: Display has impressive image quality from any angle; improved speaker system; new SD card slot.

CONS: Glossy screen may frustrate some users; FireWire 400 peripherals require an adapter; Apple Remote not included.

PRICE: $1499

COMPANY: Apple, www.apple.com

FULL REVIEW: macworld.com/5483

3.06GHz 27-Inch iMac Core 2 Duo

PROS: Display has impressive image quality from any angle; Mini DisplayPort has video-in support; improved speaker system; new SD card slot.

CONS: Glossy screen may frustrate some users; FireWire 400 peripherals require an adapter; Apple Remote not included.

PRICE: $1699

COMPANY: Apple, www.apple.com

FULL REVIEW: macworld.com/5484

MacBook

Apple's entry-level laptop gets the unibody treatment

BY JONATHAN SEFF

Targeted at average computer users, students, and PC switchers, the MacBook is Apple's best-selling Mac model. In its first major remodeling since 2006, the polycarbonate MacBook has gained many of the marquee features of the 13-inch MacBook Pro (4½; macworld.com/5052), including a unibody design, a glass trackpad, and an LED-backlit display.

New Design

The unibody design involves making the MacBook's main case out of a single piece of polycarbonate plastic, which results in fewer parts, fewer screws, a lighter weight, and better durability.

As with Apple's other unibody laptops, the MacBook's battery is not user-replaceable. Apple says that the battery gives you between three and a half and seven hours of juice and up to 1000 charge cycles before being reduced to 80 percent capacity. Apple says that the battery should take about five years to reach that point, but your mileage will vary. The company charges $129 to replace the battery, which can be done as a same-day service in an Apple Store.

In our battery test, the charge lasted for an impressive four hours and nine minutes while we played a looped video clip in QuickTime X at full screen and full brightness but with AirPort turned off. That was exactly the same duration as with the 2.26GHz 13-inch MacBook Pro, and 40 minutes longer than that clocked by its predecessor, the 2.13GHz 13-inch MacBook (4½).

Also new to the MacBook is a glass Multi-Touch trackpad with gesture support. It's larger than the combined pad-and-button area on the old model. After using the new MacBook for a while, I've found the smooth, large trackpad more enjoyable than the one on my earlier-generation MacBook.

The 13.3-inch display offers the same 1280-by-800-pixel resolution as before, but as with all other Mac portables, the new MacBook uses LED backlighting on its display instead of CCFLs (cold cathode fluorescent lamps). This means the display is noticeably brighter than before. But when viewed side by side with the screen of the older MacBook, the new MacBook's screen shows a yellow color shift when you change your horizontal viewing angle (the previous model simply got more washed out). The 13-inch MacBook Pro suffers from the same color shifting.

Inside and Out

The new MacBook still uses an Intel Core 2 Duo processor, but the speed of it has bumped up from 2.13GHz to 2.26GHz. Like its predecessor, the new MacBook has 3MB of shared L2 cache. And although the MacBook maintains the same 1066MHz frontside bus as before, the new model supports 1066MHz DDR3 RAM as opposed to 800MHz DDR2 RAM.

The MacBook ships with 2GB of RAM, and Apple will double it to 4GB for an extra $100. Apple officially lists the maximum RAM at 4GB, but the MacBook uses the same chipset and components as the 13-inch MacBook Pro, which means you can actually install up to 8GB of RAM. Of course, 4GB SO-DIMM RAM modules are still expensive, but as prices drop over time, having that 8GB ceiling as an upgrade option will be a good thing.

Graphicswise, the new MacBook uses the same nVidia GeForce 9400M

2.26GHz 13-Inch MacBook

4

PROS: Unibody design makes for a lighter, more comfortable MacBook; impressive battery life; glass Multi-Touch trackpad; performs as well as or better than the 2.26GHz 13-inch MacBook Pro; support for up to 8GB of 1066MHz RAM.

CONS: No FireWire port; no SD card slot; no IR port; no video adapters included.

PRICE: $999

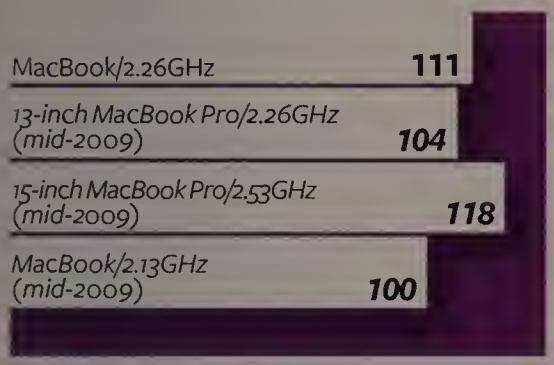
COMPANY: Apple, www.apple.com

FULL REVIEW: macworld.com/5481

PHOTOGRAPHS COURTESY OF APPLE

Macworld Lab Test

Speedmark 6 Test Results



Longer is better. Reference systems are in *italics*. Speedmark 6 scores are relative to those of a 2.13GHz MacBook with 2GB of RAM, which is assigned a score of 100. All systems were running Mac OS X 10.6.1. The 15-inch MacBook Pro had 4GB of RAM, while the other laptops had 2GB.—MACWORLD LAB TESTING BY JAMES GALBRAITH, CHRIS HOLT, AND ROMAN LOYOLA

For complete benchmark test results, please visit macworld.com/ **5503**

graphics processor (which shares 256MB of RAM with the main memory) as both the previous version and the 13-inch and low-end 15-inch MacBook Pros. In our Call of Duty test, the new MacBook produced almost one frame per second more than before, but a full frame per second less than the 13-inch MacBook Pro with the same specs.

On the outside of the MacBook, the infrared (IR) port that used to sit on the front right edge is conspicuously absent. Without an IR port, you can't use an Apple Remote to control Front Row, volume, and the like. You can, however, use an iPhone or iPod touch with a remote-control app over Wi-Fi.

You'll also notice some changes to the array of ports on the side of the MacBook. The biggest difference is that the FireWire port has disappeared—until now, it was a staple on all polycarbonate MacBooks. If you need a FireWire port—for connecting a camcorder or for using FireWire Target Disk mode, for example—the MacBook isn't for you.

The display connection is now the Mini DisplayPort (previously there was a mini-DVI connector), and Apple is using a single audio port for analog/digital output and line-in. The other ports are gigabit ethernet, MagSafe power, two USB 2.0, and a Kensington lock slot. As before, the right side features an 8X slot-loading double-layer SuperDrive.

Performance

To gauge the new MacBook's speed, Macworld Lab ran our full suite of benchmarks. The new MacBook's slightly faster processor speed and improved RAM speed make this MacBook a little bit faster than its predecessor, as you might expect. The new 2.26GHz Core 2 Duo MacBook posted a Speedmark 6 score that was 11 points higher than that of its predecessor, the 2.13GHz Core 2 Duo MacBook.

The new MacBook also matched or bested the 13-inch 2.26GHz MacBook Pro in almost all of our tests—somewhat surprising considering that the two systems have almost identical components (although it's possible that the MacBook Pro's smaller hard drive was a factor, or that our test system had a somewhat wonky hard drive). In running Speedmark 6, the new MacBook scored 7 points higher than the 13-inch 2.26GHz MacBook Pro.

Macworld's Buying Advice

The MacBook benefits nicely from its unibody face-lift: It's lighter and more attractive, and it performs better than the model that it replaced. It doesn't feel like an entry-level system. If you have only USB-based camcorders, hard drives, and peripherals, the missing FireWire port won't be an issue for you. However, if you're still using FireWire equipment and plan to use said equipment with your laptop, you should instead look at the MacBook Pro. (An SD card slot is less of an issue, since you can just buy an inexpensive card reader.)

No FireWire The new MacBook doesn't include a FireWire port.

Introducing Speedmark 6

Back in August 2009, Apple entered the era of Snow Leopard. Now, with Speedmark 6, our test suite enters the Snow Leopard's den.

Speedmark is Macworld Lab's standard test tool for benchmarking new and upgraded Macs. It uses real-world applications and everyday tasks. Macworld Lab follows a detailed script to perform 17 tasks. Each task is performed three times. We compare the results to those of a 2.13GHz MacBook with 2GB of RAM (mid-2009), which is assigned a score of 100. We then take the geometric mean of the normalized scores.

Macworld Lab has been tweaking Speedmark to better accommodate Snow Leopard and to test the Macs on which it runs. Of course, that means that the new version, Speedmark 6, runs on Snow Leopard and supports only Intel-powered Macs.

Many of Speedmark's tests are new, and a few of the new tests reflect reader suggestions. The applications in our test suite include Aperture, Call of Duty 4, Compressor 3.5.1, iMovie '09, iTunes '09, Pages '09, and Photoshop CS4. We also run three tests in the Finder, and run Cinebench R10, MathematicMark 7, and *PC World*'s WorldBench, using the Parallels 5 virtualization software.—JAMES GALBRAITH

Jonathan Seff is a *Macworld* senior editor.

Mac Mini

Apple's most affordable computer gets a speed bump

BY DAN FRAKES

The latest Mac mini revisions offer comparatively minor improvements on their predecessors, which were released in early 2009. Both models remain 6.5 inches square and 2 inches thick and weigh just under 3 pounds each. Each continues to offer a gigabit ethernet port, a FireWire 800 port, five USB 2.0 ports, digital/analog audio input and output minijacks, a security lock slot, and an IR receiver for the Apple Remote. You also still get 802.11a/b/g/n wireless, Bluetooth 2.1 + EDR, and an 8X dual-layer SuperDrive.

The latest minis include an nVidia GeForce 9400M video processor; however, this time around the 9400M takes advantage of up to 256MB of main memory on both models. The $599 early-2009 mini shipped with only 1GB of RAM, which limited the 9400M to only 128MB of memory. The 9400M again drives two video ports: a mini-DVI port that uses an included adapter to connect to standard DVI displays, and a Mini DisplayPort connector identical to those found on the current iMacs and MacBooks. The Mini DisplayPort jack works directly with Mini DisplayPort–equipped displays or even the latest iMac models, which can be used as a display. You can also use Apple's $29 Mini DisplayPort to DVI Adapter to connect a standard DVI display.

Modest Improvements

Where the latest models differ from their predecessors are in processor speed, memory, and hard-drive capacity. The $599 model now ships with a 2.26GHz Core 2 Duo processor, 2GB of 1066MHz DDR SDRAM, and a 160GB SATA hard drive (up from 2GHz, 1GB, and 120GB, respectively). The $799 model now sports a 2.53GHz processor, 4GB of RAM, and a 320GB hard drive (improved from 2GHz and 2GB; the previous $799 model had the same hard-drive capacity). All hard drives remain 5400-rpm, 2.5-inch SATA drives.

The system bus on both models remains at 1066MHz, with the CPU hosting a 3MB L2 cache. You can upgrade the $599 model, when you buy from Apple, to a 2.53GHz processor, and you can upgrade the $799 model to 2.66GHz; each upgrade costs $150.

Apple confirmed that you can still upgrade your mini yourself without voiding the warranty. However, as in the past, the upgraded components—third-party RAM and hard drives—aren't covered by the mini's warranty, and if you break anything in the process of upgrading, the damage is not covered.

If you're planning on using the Mac mini with RAM-hungry apps, there's a new wrinkle to consider. As with the previous line, both new minis officially support 4GB of memory. According to Websites such as macminicolo.net, 123Macmini.com, and OWC (www.macsales.com), however, both the previous and the new Mac mini lines can actually handle up to 8GB of RAM when running the latest firmware and Snow Leopard. (Apple says that such configurations are officially unsupported.) Of course, you'll have to shell out nearly $500 for such an upgrade, but it's nice to know it's an option if the need ever arises—or as RAM inevitably gets cheaper.

2.26GHz Mac Mini (Late 2009)

PROS: Tiny size; impressive set of features; all the dramatic improvements of the early-2009 model plus better performance.

CONS: Slow hard drive; difficult to upgrade.

PRICE: $599

COMPANY: Apple, www.apple.com

FULL REVIEW: macworld.com/5486

2.53GHz Mac Mini (Late 2009)

PROS: Tiny size; impressive set of features; all the dramatic improvements of the early-2009 model plus better performance; no longer a poor value compared to the $599 model.

CONS: Slow hard drive; difficult to upgrade; not a dramatic performance improvement on $599 model.

PRICE: $799

COMPANY: Apple, www.apple.com

FULL REVIEW: macworld.com/5486

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dexim DCA177

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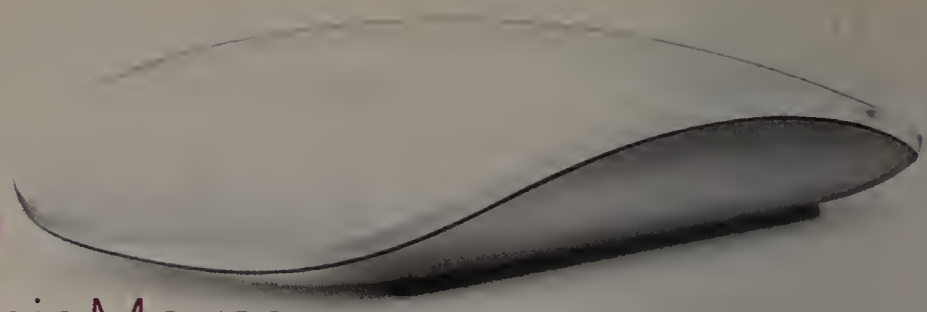


Magic Mouse

Based purely on aesthetics, Apple's new $69 Magic Mouse (●●●½; macworld.com/5485) is a crowning achievement for the company's design team, and its Multi-Touch features work well. But it may not be incentive enough to abandon your current mouse.

Multi-Touch technology acts in place of a scrollball. You can use the whole surface above the Apple logo for finger swipes. Scrolling with Multi-Touch is easy and feels natural. The other helpful Multi-Touch functions are two-finger swiping left or right for moving forward or back in iPhoto or Safari, and holding down the Control key on your keyboard and swiping up and down to zoom.

Multi-Touch works smoothly, but it doesn't feel any more or less advantageous than a scrollball. I hope driver updates or third-party applications will include more functions that will demonstrate the input advantages of Multi-Touch.

There are only two buttons on the Magic Mouse, a severe limitation—especially for anyone who's already using a mouse with more than two buttons, like the Apple Mouse.

I had no transmission problems with the Magic Mouse's Bluetooth, which has a range of 33 feet. After sitting idle long enough to trigger the mouse's sleep mode, the mouse reconnects with the Mac virtually instantaneously—a pleasant surprise.

The biggest disappointment with the Magic Mouse is the way the mouse feels as you move it on a table, mouse pad, or desktop—it's a grinding, rough feel.

Although it's not perfect, the Magic Mouse successfully combines design and usability. It's great as a two-button wireless mouse, but if you need more than two buttons, the Magic Mouse is not for you.—ROMAN LOYOLA

Performance Increases

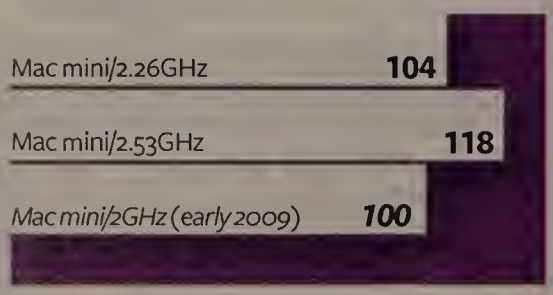
The Mac mini line has always been about size and value, rather than performance. The early-2009 models were prime examples: While they were the first minis that were truly capable of handling the iLife suite and playing processor- and graphics-intensive games such as Call of Duty 4, they performed more like MacBooks than Mac Pros—or even iMacs. So although the late-2009 minis are all about increasing performance, you shouldn't expect to be wowed by their power.

To test the improvements, we ran our latest suite of benchmarks on both new models, as well as on the new $599 model upgraded to 4GB of RAM; the $799 early-2009 model; and the most recent pre-2009 Mac mini, the 1.83GHz 2007 model, upgraded to 2GB of RAM (our benchmarks require 2GB). We didn't test the $599 early-2009 mini this time around, because once you upgrade it to 2GB of RAM, the only difference between it and the $799 model is the hard drive.

The new Mac minis offer decent speed increases compared with the early-2009 models. While the margin of improvement varied depending on the test, the new $599 (2.26GHz) model had a Speedmark 6 score that was 4 points higher than the $799 (2GHz) previous model, and the new $799 (2.53GHz) mini was a whopping 18 points higher.

Macworld Lab Test

Speedmark 6 Test Results



Longer is better. Reference system is in *italics*. Speedmark 6 scores are relative to those of a 1.5GHz Core 2 Duo Mac mini, which is assigned a score of 100. All systems were running Mac OS X 10.6.1, with 2GB of RAM.—MACWORLD LAB TESTING BY JAMES GALBRAITH, CHRIS HOLT, ROMAN LOYOLA, AND HELEN WILLIAMSON

For complete benchmark test results, please visit macworld.com/ **5503**

Comparing the two new models directly, the $799 mini had a Speedmark 6 score that was 14 points higher than the stock $599 mini.

Where *didn't* the new Mac minis improve significantly on their predecessors? That requires a closer look at the tests within the Speedmark 6 test suite. The early-2009 Mac mini actually bested the new 2.26GHz model—and tied the new 2.53GHz mini—in our Finder Duplicate test, which involves duplicating a 1GB folder of files. The older model also bested—slightly—the new 2.26GHz model in our Movie Import, Finder Unzip Archive, and iPhoto Import tests. These results are likely explained by a slightly faster hard drive in the older $799 model.

If you're using the Mac mini that came out prior to the big early-2009 upgrade—the 1.83GHz 2007 model—the latest minis offer major performance boosts: The most recent $599 model finished our benchmark tests in 29 percent less time than the 2007 mini, and the new $799 mini bested the older model by 36 percent.

Macworld's Buying Advice

The Mac mini continues to be a great option for people new to the Mac who already have a display, keyboard, and mouse. As for current Mac owners, if you purchased a Mac mini earlier this year, these relatively minor performance improvements are unlikely to convince you to upgrade, unless a 10 to 20 percent jump in performance will mean big productivity gains. But if you have an older Mac mini—or an older Mac of another line—and you're looking to upgrade, the latest minis are appealing. They give you all the impressive updates of the models released earlier this year along with better performance.

As for which of the two models to consider, unless you need the very best performance in a computer the size of a mini, the $599 model is the better value, giving you most of the power of the $799 model with enough cash left over to splurge on a huge, fast, external hard drive—and maybe even a few other accessories.

Dan Frakes is a *Macworld* senior editor.

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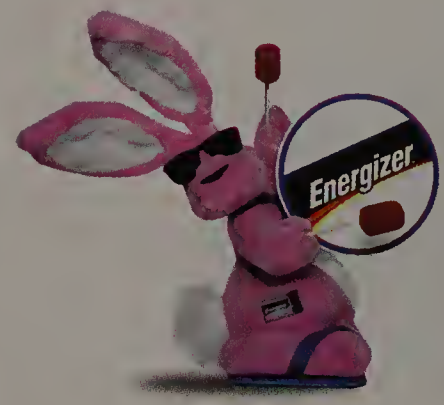

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Hi-Fi Meets HIGH TECH

Turn your old home entertainment center into a modern marvel with streaming music, smart gear, and a digital library

Is your home entertainment system in need of an upgrade? Would you like your Mac to play a more central role in your media-enjoying habits? Then let us help you figure out the products and strategies for taking the next step.

If you're looking to set up a housewide audio system, centralize your media collection, take advantage of streaming music services, or control your Mac-based media center with your iPhone or iPod touch, read on to learn all you need to know.

Illustration by **JONATHAN CARLSON**

COMPUTER

STREAM AUDIO AROUND THE HOUSE

by **DAN FRAKES** and **JASON SNELL**

Many of us here at *Macworld* are music lovers. We listen to a lot of music in a lot of places around the house. Which means many of us are also big fans of Sonos's Digital Music System (www.sonos.com), which lets you easily send your music into multiple rooms by using a combination of hardware, software, and remote controllers. Some of us are also longtime fans of Logitech's Squeezebox product line (www.logitechsqueezebox.com), which similarly lets you pipe digital music all over your house.

ZONEPLAYER 120

But every time we write about Sonos or Squeezebox, a number of readers (understandably) ask, "Can't you do the same thing with a bunch of AirPort Express units and speakers by using AirTunes" (a technology that allows you to play audio from iTunes on a remote audio system connected to an AirPort Express)? After all, the Sonos and Squeezebox systems are relatively expensive, so some people wonder why you would opt for either over a system based on Apple gear.

With that question in mind, we set out to see if we could put together a whole-house audio system, based on AirPort Express units, that can compete with a Sonos- or Squeezebox-based setup.

GETTING READY

Unless you've got Ethernet wired throughout your house, the first thing you'll need to do for any of the three systems is set up a wireless network. For an AirPort Express–based system, that means a standard Wi-Fi network. Logitech's Squeezebox players work with both Ethernet and Wi-Fi base stations. The Sonos system, on the other hand, creates its own, proprietary wireless network, but still needs to connect to an existing network (with Internet access) somewhere. If your router or network port is in a closet or a room where you won't be listening to music, you can use the $99 **ZoneBridge**, a compact box that connects to your wired network and acts as the first node in the Sonos wireless network. If you *do* plan to listen to music in the room that contains your network port, both the $349 **ZonePlayer 90 (ZP90)** and the $499 **ZonePlayer 120 (ZP120)** are good options, as they include ZoneBridge functionality.

You'll also need a place to host your music. That location can be your iTunes Library or, with the Sonos and Squeezebox systems, a network drive. For example, the Sonos can connect to music on a Time Capsule, a USB hard drive connected to an AirPort Extreme base station, or an Ethernet-equipped network-attached-storage (NAS) drive connected to your network.

Delve Deeper

Looking for a more in-depth discussion of everything you need to set up an audio system throughout your house? Check out macworld.com/5487 to learn more.

CHOOSE YOUR ROOMS

The next step is pumping your music into your rooms. The Apple system uses a $99 **AirPort Express** unit (4 mice; macworld.com/3509); or, if you've already got a $229 **Apple TV** (4 mice; macworld.com/3454) in a room, you can use that instead.

Logitech offers a slew of options, such as the $300 **Squeezebox Touch**, the $400 **Duet**, and two all-in-one systems—the $300 **Squeezebox Boom** and the $200 **Radio**. With the Sonos system, each room you want to listen to music in needs one of the aforementioned ZonePlayers or the all-in-one $399 **ZonePlayer S5** (4 mice; macworld.com/5494).

TAKE CONTROL

All three systems provide software for controlling playback and setting up playlists. For remote control, Apple offers the free **Remote** app (4½ mice; macworld.com/5029) for the iPhone or iPod touch.

For the Logitech system, you'll similarly get the best multiroom control by using your iPhone or iPod touch. Logitech doesn't supply an app, but Penguin Loves Music's $10 **iPeng** (macworld.com/5488) works well. Logitech also offers a dedicated hardware remote, the $300 **Squeezebox Controller**, that includes a small color screen and a faux Click Wheel controller.

Sonos provides a free app for the iPhone or iPod touch—**Sonos Controller for iPhone** (macworld.com/5489)—as well as the $349 **Sonos Controller 200** (4½ mice; macworld.com/5221).

SANYO

SANYO Dual Camera Xacti with iFrame:
Easy to import, edit and share video

DOWNLOAD, EDIT AND SHARE VIDEO EASILY WITH SANYO DUAL CAMERAS

Compatibility with iFrame lets you share video across multiple platforms and devices

Video enthusiasts, wait no more. When you are passionate about video and photography, you want to upload, edit and share your creations as soon as possible. Converting or transcoding files to the right format takes time that can be better spent editing or sharing instantly. Now, thanks to the new Dual Camera Xacti from SANYO, you no longer have to take that extra step. These new cameras are the first to offer compatibility with iFrame, a next-generation video mode designed specifically to make life easier for video enthusiasts in today's online world.

By recording in iFrame, introduced in iMovie 8.0.5, the video in your camera is in the same format that you use to edit, so importing video is quick and file sizes are small. You'll be able to start editing and sharing your movies immediately across multiple platforms and devices, including social networking sites, TVs, computers, iPods and other portable video devices. And because iFrame is based on standard technologies such as H.264, AAC, MP4 and QuickTime, iFrame can be used in both Mac and PC editing applications.

Both Dual Cameras, models VPC-FH1A and the compact VPC-HD2000A, offer the dual capability to shoot 8-megapixel digital photos while you are shooting video, so you'll never miss a special shot. They also feature several video modes, including full HD 1080p/60fps video and super-slow-motion playback mode of up to 600fps for special effects.

With a 16GB SDHC memory card, you can capture more than 11 hours of video in standard definition and approximately 1.5 hours in full HD video mode. Camera startup is as fast as 1.7 seconds, and a high-capacity battery delivers approximately 135 minutes of recording time.

Other features of the Dual Cameras normally found in higher-priced video and photo cameras include:

- **Face-chasing technology** that automatically reads and corrects focus and lighting for up to 12 different subjects
- **16x Advanced optical zoom** for video and 10x for still images
- **Optional lenses** for telephoto, wide-angle and semi-fisheye
- **Digital image stabilizer** (movies and stills)
- **Built-in still photo flash**
- **HDMI and USB cable outputs** for direct connection to TV, DVR and outboard hard disk

These features, along with aggressive pricing of $499.99 for the VPC-FH1A and $599.99 for the VPC-HD2000A, make the Dual Camera Xacti the perfect choice for sharing high-quality movies with family and friends, for video bloggers, and for up-and-coming videographers.

Dual Dynamics

With a SANYO Dual Camera, you'll never miss another precious photo opportunity. Dual Cameras enable the simultaneous shooting of video clips and 8-megapixel still images with a simple press of the shutter button while you are shooting a movie clip. When you do so, the still image at that moment is saved to a separate directory for convenient editing, viewing and sharing with friends and family. An advanced CMOS image sensor enables still images to be interpolated to 12-megapixel quality.

To purchase a Dual Camera, or for more information, visit www.us.sanyo.com/Dual-Cameras

THE EXPERIENCE

There's no denying that the Sonos excels at delivering multiroom audio, but the Squeezebox does the job, too. Both systems also support multiple audio signals, allowing party guests, say, to listen to a different playlist in each room.

The AirPort Express setup, on the other hand, supports only a single audio signal, so while you can choose which rooms get audio at any given time, all rooms must listen to the same thing.

Beyond multiroom support, the Sonos system and the Squeezebox line also have a number of other advantages over the Apple-only system. They support more formats than iTunes (including WMA, FLAC, and Ogg Vorbis); they let you browse and play Internet radio stations; and they include sleep and wake functions. But for many people, perhaps the biggest advantage the Sonos and Squeezebox systems have is their built-in support for a slew of music services—Rhapsody, Napster, Sirius, Pandora, and Last.fm among them.

The Apple-based system isn't without its own advantages, however. The most obvious is that many users already have at least some of the required equipment. Similarly, if you're already an iTunes user, the AirTunes system will be instantly familiar; both the Sonos and the Squeezebox line offer queue-based interfaces that can be a bit confusing to those weaned on iTunes.

AIRPORT EXPRESS

Since the Apple system is controlled directly from iTunes, it also integrates superbly with iTunes features (such as Genius) and playlists (including smart playlists). The Squeezebox system automatically loads your iTunes library and playlists, but it doesn't currently support other features such as Genius and iTunes DJ. The Sonos system can import iTunes playlists, but the feature is kludgy, and you need to reimport the playlists each time you modify them in iTunes.

The AirTunes system also supports iTunes's digital rights management (DRM) system; Sonos and Squeezebox gear can't play such music. Also, adding music is a bit easier and more immediate with the AirTunes system. Adding music to the Squeezebox and Sonos systems involves a delay—they must reindex your music library in order to recognize new music.

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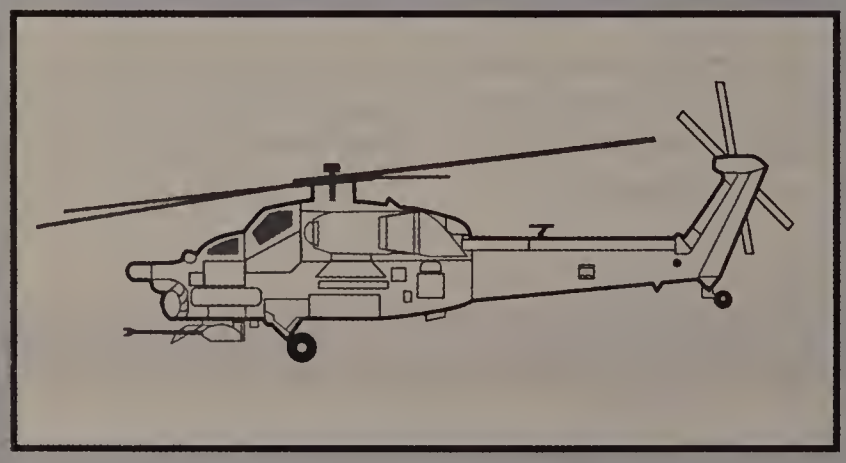

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THE VERDICT

For people who already have a good amount of the necessary Apple hardware, especially an AirPort Extreme and several AirPort Express units, an AirTunes system is appealing thanks to the much lower cost of entry.

If you're starting from scratch, however, the choice is a little harder. If you think you'll spend most of your time listening in only one room at a time, or listening to the same music in all rooms, and if most of the music you'd want to listen to is already in iTunes, an AirPort Express–based whole-home system will likely suffice.

On the other hand, if you want more flexibility, the Sonos or Squeezebox products may be worth the extra money. The Sonos system is more expensive overall, but it offers a more elegant experience; its *mesh network*—in which each device can connect directly to any other device—makes it much more reliable in larger houses (especially those not already permeated by reliable Wi-Fi); and the ZP120, with its integrated amplifier, is perfect if you already have a good set of stereo speakers. The all-in-one ZonePlayer S5 is also a great way to get big, high-quality audio into rooms that don't need a full-blown stereo system.

The Squeezebox line is less expensive and provides multiroom capabilities that are nearly as good as the Sonos's, but it relies on your house's own Ethernet and Wi-Fi networks. If you have a limited number of rooms that you need to fill with expansive sound, plus several smaller rooms that could be served well by the integrated speakers in the Boom or Radio, a Squeezebox system is a better deal.

Whatever approach you take, one thing's for sure: Once you've experienced being able to listen to your favorite music wherever you are in the house with just a few taps on a screen, you'll wonder how you ever got along without your housewide system.

PHOTOGRAPH BY PETER BELANGER

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CENTRALIZE YOUR MEDIA

by KIRK MCELHEARN

Apple may not offer a dedicated media center, but the features its hardware and software provide can come pretty close. You can watch movies on a large-screen Mac such as a 27-inch iMac, connect a laptop to your HDTV, or use an Apple TV to bridge the gap between your Mac and your big-screen TV and stereo system.

Whichever method you use, however, the key to running a smooth system is organizing your content. Most likely you use iTunes as your media repository. It's best to put all your music, movies, and videos on one Mac so you can either sync them to your Apple TV or stream them from that Mac (and on a fast wired network, streaming works great).

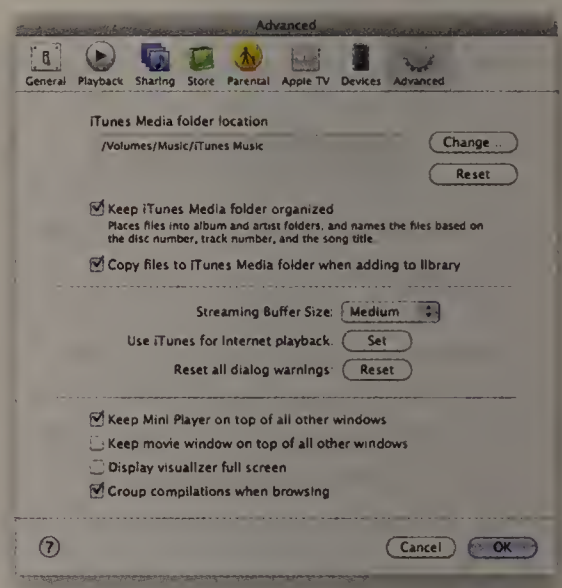
Get Set Up To start with, determine how much disk space you'll need. If you have more media than space, you'll need to use an external hard drive to hold your iTunes library. Once you connect the drive, you can move your existing iTunes library to it as follows: First, copy your iTunes Media folder (what iTunes 9 calls new iTunes folders) or iTunes Music folder (if you've upgraded from an older version of iTunes) to the new hard drive. In iTunes' preferences, choose the Advanced tab and change the iTunes Media folder location. Click on Change, browse to find the new folder on the external drive, select it, and click Choose. Also be sure to select the Copy Files To iTunes Media Folder When Adding To Library checkbox so that all your new content gets added to the external drive.

Start Copying Now it's time to copy the movies, music, podcasts, and audiobooks from your various Macs to the media server. iTunes 9's Home Sharing feature lets you do this easily. In the Sharing tab of iTunes' preferences, select Look For Shared Libraries and, for each other Mac from which you want to copy music, choose Share My Library On My Local Network.

Once you've copied over your media files, your media server will see your other libraries in the Shared section of iTunes' sidebar. Click one of the libraries to see a list of music, movies, and other content. To view just part of the library, click the disclosure triangle next to the name of the library and then select one of the sublibraries (Music, Movies, TV Shows, and so on). You can filter content you already have by clicking the Show pop-up menu at the bottom of the window and choosing Items Not In My Library.

If you want to copy everything that's not in your library, just select everything in the window (⌘-A) and then click Import at the bottom right of the iTunes window. If you want to copy only a portion of the content, press ⌘-B to display iTunes' browser and look for specific albums or TV series that you want.

With Home Sharing, you can also set up the media server to automatically copy purchased content from other computers to its library. This works only if both the server and the computer whose library you're connected to use the same iTunes Store account. Note that the first time you access Home Sharing on a computer, it will prompt you to authorize that computer.



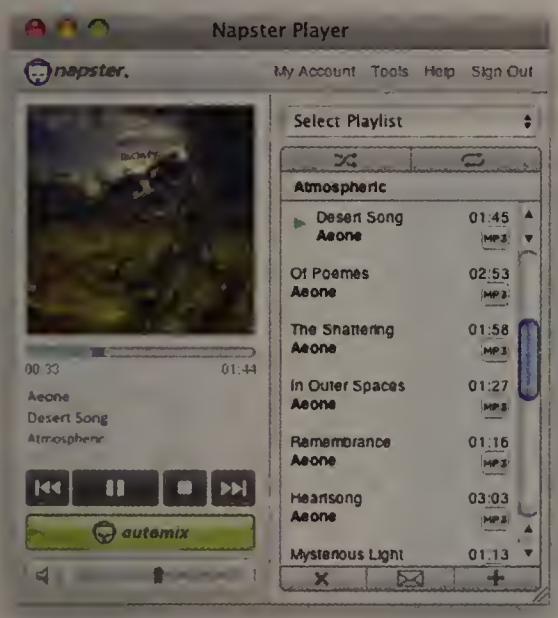
Move Your Library In iTunes' preferences, you can choose where to store your media.

iTunes Browser If you want fine-tuned control over what is copied to your media server—specific artists or TV shows, for example—use the iTunes browser.

ENJOY STREAMING MUSIC SERVICES

by CHRISTOPHER BREEN

Mention "streaming music services" around the typical gaggle of Mac users, and it's as if you suggested that the *Mona Lisa* would benefit from the application of devils horns, an eye patch, and the words *Windoze Rulez!* scrawled across her beguiling mug with permanent marker. Yet, the true multimedia Mac can greatly benefit from such services. After all, if some music is good, more is better, right? And more is exactly what these services provide. (Unlike music purchased from the iTunes Store or Amazon.com, streaming tracks aren't saved on your computer and can't be synced to an iPod or iPhone. Listening to them is more like listening to streaming radio content in iTunes.)



Napster Forget the Napster of old—the now-legit service offers streaming and downloading.

NAPSTER

The notorious file-sharing service that was Napster is no more. Instead, today's **Napster** (www.napster.com) is both a music subscription service and a music store where you can buy 256-kbps MP3 files.

Priced at $5 a month, a Napster subscription entitles you to access to Napster's multimillion-track streaming library, as well as credit for five MP3 downloads each month. You can stream Napster's music through your computer or a compatible device such as the Sonos Multi-Room Music System and Logitech's Squeezebox systems.

In addition to tracks and albums, Napster offers radio stations that stream particular genres of music. You can also listen to tracks from *Billboard*'s charts and watch music videos.

PANDORA

Billing itself as a "new kind of radio," **Pandora** (www.pandora.com) is a streaming service that plays music based on artists and tracks you choose and the positive and negative feedback you provide about the music it plays. You can bookmark tracks and artists, and click these bookmarks to learn more about the artist and purchase their work.

The free version of Pandora limits you to 40 hours of listening per month. Pandora's pages feature ads, and you'll also hear the occasional audio ad between tracks. Listeners are limited to skipping six songs per hour. People who have free accounts can skip a total of 12 songs per day.

You can upgrade to Pandora One for $36 a year. Do this and the audio ads disappear, as does the daily skip limit (though you're still limited to six skips per hour); plus you'll receive a higher-quality, 192-kbps stream.

LAST.FM

The free **Last.fm** (www.last.fm) bases the music it streams on the music you play on your computer or iPod as well as on the Last.fm stations you create and listen to. In addition to applying its analytical tools, Last.fm compares the music libraries of its users, making recommendations based on intersecting tastes (similar to iTunes' Genius feature).

Last.fm also has a commercial side. From within the service, you'll find links to the iTunes Store, Amazon MP3, and 7digital, where you can purchase tracks. For $3 a month you can browse and listen to Last.fm without advertising interruptions. Though Last.fm doesn't offer on-demand listening, you can listen to a 30-second preview of any track in its library.

RHAPSODY

For $13 a month, Real Networks' **Rhapsody** (www.rhapsody.com) gives you access to millions of streaming audio tracks that you can play on demand. You can also purchase 256-kbps MP3 tracks and albums. You can stream Rhapsody's music to your computer, to Squeezebox and Sonos systems, and to TiVo boxes.

Rhapsody recently released an iPhone app that lets Rhapsody To Go subscribers ($15 a month) stream Rhapsody's content to an iPhone or iPod touch. The current Rhapsody app has met with little enthusiasm due to the generally poor quality of the stream, but the company has indicated that it's working on providing better sound from the app.

Rhapsody With Rhapsody, you can stream to computers, TiVos, iPhones, and iPod touches.

CONTROL YOUR MAC FROM YOUR iPHONE

by CHRISTOPHER BREEN

Getting up from your couch to "change the channel" on your Mac-based media center is so 1970s. If you're going to the trouble to mutate a Mac into something that delivers music and video via your AV gear—or even if you just want to enjoy a movie on a 27-inch iMac across the room—you'll also want to replicate the experience of controlling your media setup from afar. And with a remote-control app for your iPhone or iPod touch, you can manage the works without a lot of fuss and bother.

I looked at a handful of capable remote-control apps available for these devices: R.P.A Tech's $2 **Air Mouse Pro** (★★★★; macworld.com/5490), Evan Schoenberg's $5 **Rowmote Pro** (macworld.com/5491), Hoofien's $4 **Snatch** (★★★★½; macworld.com/5492), and RoboHippo's $5 **HippoRemote** (macworld.com/5493). All of them allow you to control not only iTunes but also the other media applications you're likely to use. And all of them provide you with virtual versions of a trackpad, a keyboard, and play controls.

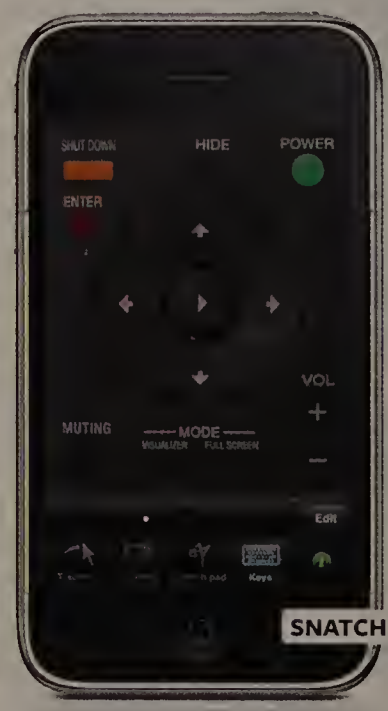
AIR MOUSE PRO

Air Mouse Pro's focus is largely on the virtual trackpad and keyboard, though it does offer separate play-control interfaces for operating media applications and navigating a Web browser. Using the Air Mouse Server software on your Mac, you can create hotkeys for the Function, Media, and Web screens, assigned by application. The Media button launches iTunes by default; the Web button launches Safari.

Rotate the iPhone or iPod touch so that it's in landscape orientation, and the entire screen becomes a large trackpad. There's very little lag between the time you touch the trackpad or tap a key and when the Mac responds. You can even adjust the speed for the pointer, trackpad, and scrolling function.

ROWMOTE PRO

Although Rowmote Pro includes a trackpad/clicker interface and can produce a keyboard along with modifier keys, it additionally offers a controller interface that emulates Apple's physical remote control, complete with plus, minus, next, previous, play/pause, and menu buttons. People accustomed to using Apple's remote will find Rowmote Pro very convenient—particularly since it works over Wi-Fi (as do all these applications), so line-of-sight isn't an issue as it is with IR remotes. Rowmote Pro includes presets for just about every media application you can think of, including iTunes, Boxee, Hulu Desktop, iPhoto, Keynote, EyeTV, DVD Player, and Front Row.



SNATCH

Snatch operates in four main modes: Tracking is the virtual trackpad with left and right click; Scrolling is for scrolling windows horizontally and vertically; Launch Pad lets you launch applications you've added to it and switch between open applications; and Keys displays your iPhone or iPod touch's keyboard complete with modifier keys, as well as a keyboard with Function and extended keys—you use the Keys screen to enter text and initiate commands.

When you tap and hold the Keys button, an interface appears where you can create buttons and then assign functions to them—for example, a button that opens an application's preferences window. You can share the screens you create with others (or load ones others have created) via Hoofien's Website.

HIPPOREMOTE

HippoRemote works like the other apps, but it has some unique features too. At the bottom of the trackpad is a rounded area that represents the scrolling control. Tap this area, and a virtual dial appears on the face of the iPhone or iPod touch. Wheel your finger around, and the dial turns and the frontmost window of the active application scrolls.

HippoRemote also includes preconfigured keypads for controlling applications—currently there are 23 built-in application profiles.

And HippoRemote includes a Keyboard History feature, which remembers what you've typed in the application and then allows you to reenter a typed phrase simply by tapping it in the Keyboard History area.

WHERE TO TURN

Each of these apps has its strengths, and none of them are terribly expensive—for $17 you can have them all. Snatch lets you configure the remote the most extensively, but doing so will take a little work. Rowmote Pro is dead simple to operate thanks to its similarity to Apple's hardware Remote. AirMouse Pro offers complete mouse and keyboard emulation, and HippoRemote is nicely configured right out of the box. In short, any of them are worth a try.

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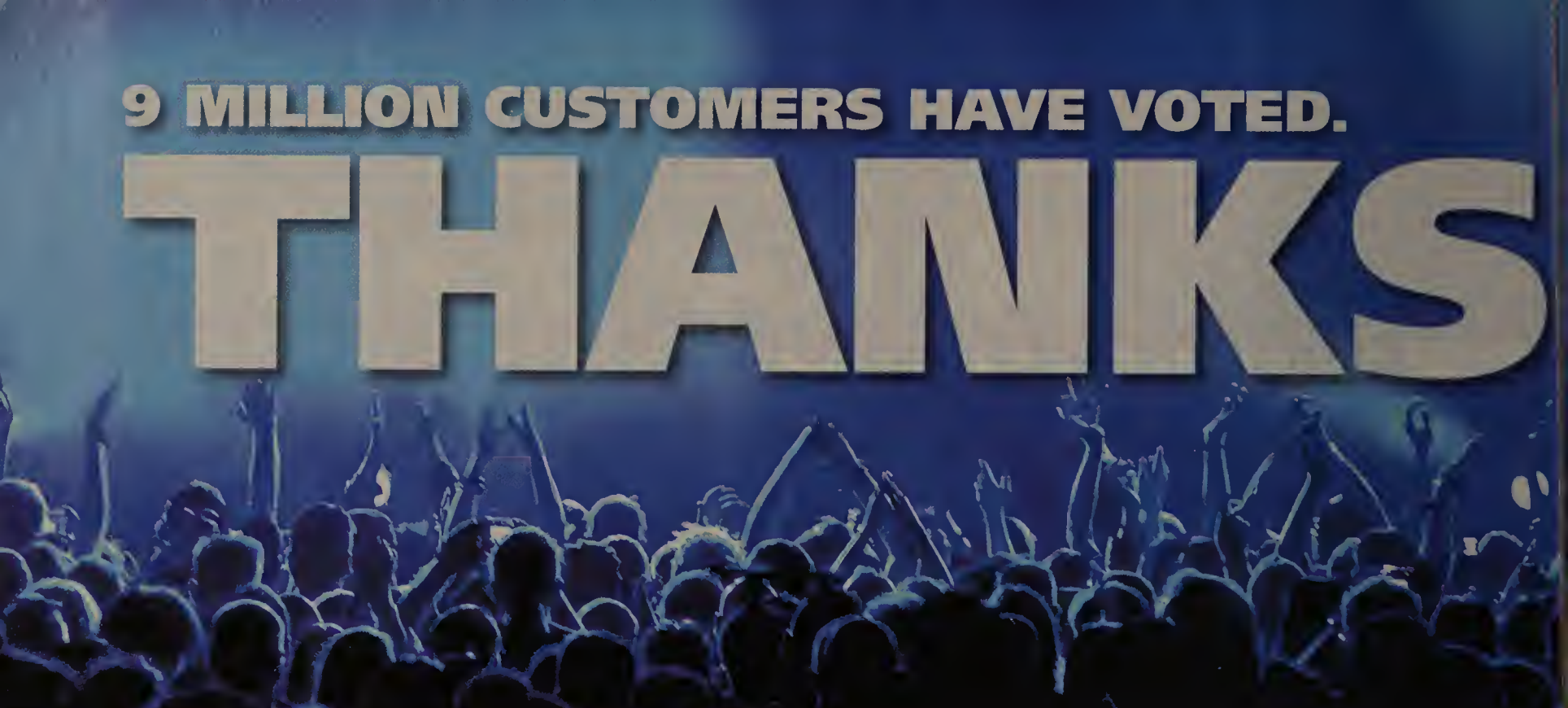

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Total Annual Cost	~~$8.99~~ $6.99 first year*	$18.95	$19.86

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BY DAN FRAKES

Turn It Up

Reviewed:
9 stereo speaker systems that boost your Mac's audio

While every computer includes a built-in speaker or two, those speakers don't do your Mac justice. If you want to get the most out of your music, movies, and games, you need a set of computer speakers—a self-powered system you simply plug into your Mac's audio-out jack and enjoy.

The variety of computer speakers, and their ranges in price and quality, are wider than ever. To help you choose a speaker set for your desktop, we've put together this guide, which examines different speaker types and designs, features to look out for, and sound quality.

In addition to our guide, we've reviewed nine current systems, priced from $100 to $300: Altec Lansing's Expressionist Bass (FX3022) and Expressionist Plus (FX3021), Creative's GigaWorks T40 Series II, Edifier's E3350, Harman Kardon's SoundSticks II, JBL's Duet II, Logitech's Z520, M-Audio's Studiophile AV 40, and Razer's Mako. Read on to see how they measure up to our buying-guide criteria.

Computer speakers generally fall into two categories: 2.0 and 2.1. A 2.0 system (two channels, no subwoofer) comprises compact left and right speakers with the amplifier housed inside one of those speakers. A 2.1 system (two channels plus a subwoofer) uses even smaller speakers called *satellites* for higher frequencies, along with a larger speaker/amplifier component that sits under your desk and produces lower frequencies. There are other speaker sets that offer more than two channels, and those speakers are called *surround sound* systems. This review doesn't cover that category.

The biggest differences between 2.0 and 2.1 systems are in size and bass performance. A 2.0 system takes up less space overall: just two, generally small, spots on your desk. A 2.1 system, on the other hand, often takes up less space *on* your desk. Lower frequencies, which require larger speaker drivers, are handled by the subwoofer, so the 2.1's satellites can be smaller than the speakers in a 2.0 system. But you need a big chunk of space *under* the desk for the subwoofer/amplifier unit. In our roundup, the Duet II, FX3022, Z520, and GigaWorks are 2.0 systems. The 2.1 systems in our roundup are theE3350, the FX3021, the SoundSticks II, and the Mako.

A 2.1 system can reproduce lower frequencies—a trait called bass *extension*—and provide more powerful bass performance than the smaller drivers of a 2.0 system. A 2.1 system will also usually cost more than a 2.0 system with comparable performance.

One variant of 2.0 systems is studio monitors, which are powered speakers designed for recording and production studios. Studio monitors tend to be bulkier than typical 2.0 speakers and the satellites used in most 2.1 systems. But their larger size lets them host larger woofers that provide decent bass performance without the need for a subwoofer. The AV 40 is an example of a set of affordable studio monitors that work well as a set of computer speakers.

Placement Matters

Correctly positioning your speakers will reward you with the best possible performance. First, you want to make sure your 2.1 system's satellites are oriented to provide the best treble and midrange response. (This advice applies to 2.0 systems, as well.) Be sure the speaker's tweeters are at the same height as your ears. If the speakers are designed to tilt upward, slide the speakers forward or back on your desk until your ears are directly in the path of the tweeters.

Second, you want the left and right speakers to be reasonably far apart—but not *too* far apart—and for each to be an equal distance from your listening position.

Third, some speakers are designed to have the front of each speaker angled in toward the listener. Others should be pointed straight ahead. Check the manual for a recommendation; if you don't find one, try both positions or any angle in between to find the position that provides the best overall sound quality.

Finally, arrange the system for the best bass response. For a 2.1 system, this means the correct placement of the subwoofer. You'll get better performance if it's on the floor, but the ideal location depends on the room. Placing a subwoofer closer to a wall, and especially to a corner, enhances bass output, but I recommend at least a foot between the subwoofer and the nearest wall. You'll need to experiment with different locations to see which produces the best bass response. For a 2.0 system, you'll need to experiment with placement as well, but because of the constraints of the previous setup steps, you're limited to moving your speakers closer to, or farther away from, the wall behind your desk.

Different Designs

While good sound quality may be the top priority, the look of a set of speakers also matters. With the exception of the AV 40, which takes the shape of a traditional set of bookshelf speakers, all the models we tested have a unique design or appearance.

Perhaps the most unusual is Harman Kardon's SoundSticks II: The transparent subwoofer and test-tube–shaped satellites are as stunning today as they were when they hit the market several years ago. All three components in the Mako resemble squat mushroom caps. The Mako's drivers

face downward; sound waves exit the base of each speaker and reflect off the desk or floor. Razer claims this offers better sound across a wider listening area.

Similarly, each speaker company tends to have a "house style." Altec Lansing's recent speakers give off an industrial vibe, with radial feet and cylindrical housings, whereas Edifier's offerings sport sleek curves and a choice of metallic colors (orange, blue, gray, pink, purple, and more) that make the E3350 look more expensive than it actually is.

Size Matters

Size is important because of the effect it has on sound quality and the amount of space you have to work with. A speaker system with a larger woofer or subwoofer driver usually gives you better, or at least more powerful, bass performance than one with a smaller driver. The Mako, with its 8-inch subwoofer, easily outperformed the other systems we tested in both bass extension and output. Its satellites each measure 5.25 inches in diameter and require about six inches of clear desk space surrounding each satellite to best reflect the downward-firing speakers.

For people who don't have room for a subwoofer, a set of larger 2.0 speakers, such as the AV 40 or the FX3022, provides decent low-frequency performance while keeping the space under your desk clear.

But folks with limited desk space will find that a 2.1 system's subwoofer allows for slimmer satellites. For example, the base of each of the SoundSticks II's satellites is just a 3.5-inch ring. Some 2.0 systems also conserve desk space: The subwooferless Duet II speakers each sit atop a 4-inch round base, and the GigaWorks produces very impressive sound without a subwoofer, despite a speaker footprint of only 3.5 inches wide and 5.5 inches deep each.

Specs and Sound Quality

We tested all nine of our review systems in the kinds of environments they'd actually be used: an office and a bedroom. We evaluated the overall sound and paid attention to the clarity and extension of upper frequencies (treble); the naturalness of the midrange frequencies; and the extension and accuracy of lower frequencies (bass performance).

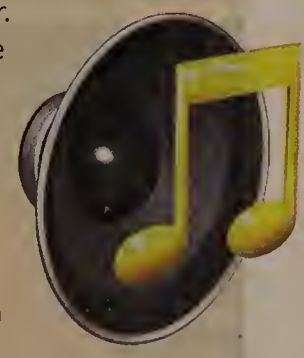
Size is important due to the effect it has on sound quality and the desk space required.

Good speakers provide a nice balance between the treble and midrange frequencies, producing full, rich sound and preserving detail. Most of our review systems performed well in these areas, but there was some variation. The treble performance of the FX3022 and the Mako, for example, wasn't as clear as that of the other systems. The midrange performance of the Z520, FX3021, E3350, and SoundSticks II

Which Volume Control Should I Use?

With traditional stereo equipment, the source component provides audio at a set volume level (called *line-level* output); that means you control the volume level via the receiver or the amplifier. But when using your computer (or an iPod or iPhone, for that matter) as the source, you add a second volume control to the mix. So do you change the volume with your computer or the speakers? You have two options.

You'll get the best sound quality by setting the source—your Mac or an iPhone—at a volume that's roughly equivalent to a line-level output, and then using the speaker system's own volume control. If you have another line-level component, such as a CD player, in your house, simply play the same audio content back on both that source and your Mac, and then set the volume on the Mac to match that of the CD player.



If you'd rather use your Mac's volume controls—for example, if your keyboard has volume keys—you need to perform a one-time calibration to find the best combination of levels between the Mac and speakers, a process called *gainstaging*. (If they are matched incorrectly, you could end up with noise at low volumes or distortion at louder volumes.) The easiest way to do this is to first set your Mac's volume level to the maximum, and then, while playing some high-level audio (your most energetic music, or the climax of an action flick), set the speaker system to the loudest level you would ever use. Finally, lower the Mac's volume back down to your everyday listening level; now, you can simply use your Mac's volume keys to change the volume.

systems was missing, to varying degrees, warmth and naturalness.

A bigger challenge was bass. To give the impression of strong bass, many vendors tweak the speakers to pump out extra upper-bass frequencies, which adds some punch but can also make speakers sound boomy. The E3350 was the worst offender here, but the FX3021 and FX3022 systems were also guilty. The SoundSticks II and the Mako, by contrast, provided good, nonboomy bass. The Mako, in fact, is one of the few review systems that can produce frequencies below 70Hz with authority while remaining tight and controlled. Action movies and games sounded very different when experienced through the Mako than through any other system.

The Duet II, FX3021, and E3350 systems struggled at the highest volumes. The AV 40, SoundSticks II, and Mako systems played the loudest without distortion.

The Z520 and the Mako also excel in situations where you're listening from various locations in the room. The Mako's satellites emit sound in a wide arc, whereas each of the Z520's speakers features an additional driver in the rear, so you get similar sound quality whether you're in front of or behind the speaker.

The GigaWorks, AV 40, SoundSticks, and Mako systems were the clear winners in terms of overall sound quality.

Special Features

The Duet II and the SoundSticks II connect to a single source (your computer); beyond letting you adjust the volume, they have no other features. But most systems provide additional options.

For example, all the other systems in our group let you connect an additional audio source, such as an iPod or iPhone, via a second audio-input jack. The AV 40, Mako, and GigaWorks provide a *third* input: an extra 1/8-inch minijack for the AV 40 and Mako, and a special jack for Creative's optional iPod dock on the GigaWorks. However, the location of the extra input(s) varies. The E3350 and Mako provide an input on a wired control pod for easy access; others provide the input within reach on the left or right speaker. On the FX3021, however, the second input

Computer Speakers Compared

Product	Altec Lansing Expressionist Bass (FX3022)	Altec Lansing Expressionist Plus (FX3021)	Creative GigaWorks T40 Series II	Edifier E3350	Harman Kardon SoundSticks II	JBL Duet II	Logitech Z520	M-Audio Studiophile AV 40	Razer Mako
RATING	♦♦♦♦	♦♦♦½	♦♦♦♦	♦♦♦	♦♦♦♦	♦♦♦½	♦♦♦½	♦♦♦♦½	♦♦♦½
CONTACT	alteclansing.com	alteclansing .com	us.creative.com	www.edifier -international .com	www.harman kardon.com	www.jbl .com	www .logitech .com	www.m -audio.com	www.razerzone .com
PRICE [A]	$130	$100	$130	$100	$170	$100	$130	$200	$300
TYPE	2.0	2.1	2.0	2.1	2.1	2.0	2.0	2.0	2.1
NUMBER OF INPUTS	2	2	3	2	1	1	2	3	3
TOTAL POWER	25 watts	36 watts	32 watts	50 watts	40 watts	12 watts	26 watts	40 watts	300 watts
VOLUME CONTROLS LOCATION	on speaker	on speaker	on speaker	remote pod	on speaker	on speaker	on speaker	on speaker	remote pod
TONE CONTROLS	none	bass (on subwoofer)	bass, treble	bass (on subwoofer)	bass (on subwoofer)	none	none	bass boost	bass (on remote)
POWER SWITCH LOCATION	top	subwoofer	front	subwoofer	none	top	front	rear	subwoofer; sleep via pod
SPECIAL FEATURES	none	none	headphone jack and additional input on front of speaker; connector for Creative iPod dock	pod with volume control, additional input, headphone jack	touch-sensitive volume controls	none	headphone jack and additional input on front of speaker	headphone jack and additional input on front of speaker	backlit; touch-sensitive pod with volume, bass, and input controls; additional input; headphone jack
FIND CODE [B]	5437	5438	5439	5440	5441	5442	5443	5444	5445

[A] Many speaker sets are available online for significantly less than these list prices. [B] In a browser's address field, typing a find code after *macworld.com/* takes you to a product's review or overview.

is on the back of the subwoofer, which can be inconvenient. Five of the systems—the Z520, GigaWorks, AV 40, E3350, and Mako—include a handy headphone jack.

Every system we tested includes its own volume control in an easily reachable location. The 2.1 systems let you separately adjust the output of the subwoofer to fine-tune the balance between the subwoofer and the satellites; however, on the E3350, FX3021, and SoundSticks II, the bass control is located on the subwoofer itself, requiring that you crawl under your desk to make adjustments. The GigaWorks system provides both bass and treble controls on the front of the right speaker.

The E3350 and Mako each include a wired control pod for easy access to the volume control, headphone jack, and one input. The Mako's pod is an impressive touch-sensitive device that also lets you adjust the bass level and choose the input.

Use Your Existing Stereo

If you already have a stereo, or if you want to use your Mac in your home entertainment system, you may not need a set of computer speakers. You can simply hook up your Mac to your existing audio system. If your receiver has an optical-audio input, and you have a recent Mac, a simple optical cable with a Mini-Toslink connector on the Mac end and whichever Toslink connector your receiver requires on the other will do the trick.

If your receiver takes only analog signals, you'll likely need a cable with a stereo minijack (for plugging into your Mac) and left and right RCA plugs (for plugging into your receiver). With an analog connection, you'll need to find the right combination of volume levels between your Mac and your stereo; see "Which Volume Control Should I Use?"

The Wallet Hit

To some extent, the more you pay, the better the sound quality or the more features you get—or both. For example, jumping from the $100 price of the E3350 and FX3021 to the $130 price of the GigaWorks and FX3022 gives you better sound quality and, in the case of the GigaWorks, a slew of additional features. While the $170 SoundSticks II doesn't offer many features, its sound quality is excellent. And, of course, the Mako has the most features, the most power, and the best bass performance.

To some extent, the more you pay, the better the sound quality.

Fortunately, computer speakers are among the most heavily discounted accessories. For example, the FX3021 (MSRP $100) is regularly available for only $75, the SoundSticks II ($170) for around $130, and the Mako ($300) for only $250. So be sure to shop around; your budget may buy you more than you think.

Macworld's Buying Advice

The best system is the one that's right for *you*: the right size, the right features, the right price, and the right sound. JBL's Duet II, which foregoes any attempt to produce bass, has excellent midrange and treble performance, making it an enjoyable system at a low price. But four of the nine systems we tested stood out: Creative's GigaWorks T40, M-Audio's Studiophile AV 40, Harman Kardon's SoundSticks II, and Razer's Mako.

If you lack space and don't need the lowest bass frequencies, the GigaWorks offers very good sound quality, great features, and a small footprint; it's the best overall value of the bunch. A step up—and taking up the most desk space—is the AV 40, which also provides impressive features and perhaps the most accurate, balanced sound, bass notwithstanding.

If you can't get by without good bass performance, the SoundSticks II is one of the best values in a full-range system, especially at street prices; though it lacks features compared with some of the other models, its overall sound quality is excellent. Finally, if you need great bass and room-filling sound, Razer's muscular Mako stands apart from the other systems and includes a variety of unique features—although it's also the most expensive.

Dan Frakes is a *Macworld* senior editor.

THE SEVEN MOST UNDERUSED FEATURES IN APPLE MAIL

Don't overlook these useful e-mail tricks

By Joe Kissell

If you're anything like me, you fall into certain habits when using programs such as Apple Mail—you get accustomed to using the same small set of core features all the time and tend to overlook capabilities that, while less obvious, are no less useful.

Based on my own experience and my observations of several other Mail users, I've compiled a list of seven truly helpful features that often go unnoticed. These are applicable to both OS X 10.5 (Leopard) and OS X 10.6 (Snow Leopard) versions of Mail.

1. The Photo Browser

I can't tell you how many times I've wanted to mail someone a photo and have then automatically fired up iPhoto to do it. (From there you can either drag the selected image into Mail or use iPhoto's Share ▸ Email command.) But there's a quicker, easier way that lets you bypass iPhoto. In Mail, choose Window ▸ Photo Browser. A floating window will appear instantly, showing the complete contents of your iPhoto library (see "Photo Browser"). Find the picture you want, drag it into a message window, and you're done.

2. Plain Text

This may be my personal bias, but I like to receive e-mail in plain text so that I can decide what font, size, style, and color the messages will use. I also like to extend that courtesy to others. Mail uses Rich Text by default for outgoing messages, but you can change this by choosing Mail ▸ Preferences, clicking the Composing icon on the toolbar, and then choosing Plain Text from the Message Format menu. (To change the format for an individual message, choose Format ▸ Make Rich Text or Format ▸ Make Plain Text.)

To force incoming messages to display in plain text by default (which isn't possible for all messages), you need to quit Mail, open Terminal (in /Applications/Utilities) and enter the following command:

```
defaults write com.apple.mail PreferPlainText -bool TRUE
```

(You can copy and paste this command from macworld.com/5450. To reverse this command, change `TRUE` to `FALSE`.)

To switch to styled text (assuming the message was styled originally) when viewing a plain-text message, choose View ▸ Message ▸ Best Alternative.

3. Multiple 'From' Addresses

If an e-mail account has more than one valid From address (for example, if you use jk@example.com as an alias to joekissell@example.com), you can configure Mail to let you use any of those addresses when sending a given message from that account.

First, choose Mail ▸ Preferences, click the Accounts icon on the toolbar, select your account, and click Account Information. Then, in the E-mail Address field, enter all the addresses you might use with that account, separated by commas. Close the Preferences window and click Save. Now, when you compose a new message, you can quickly choose any of those addresses from the From pop-up menu below the Subject field.

Why would you want to use an e-mail alias, or a modified e-mail address? Some people use these to outwit spam. See macworld.com/2749 for ideas.

4. Activity Window

Does Mail seem to take an awfully long time to check or send messages? When you're curious to know what your e-mail program is up to behind the scenes, choose Window ▸ Activity (⌘-0) to display a floating window showing each operation Mail is currently performing. Better yet, you can also stop any given activity by clicking on its Stop icon.

5. Connection Doctor

If you encounter problems sending or receiving mail, you don't need to guess at the nature of the problem. Find out exactly what's wrong by choosing

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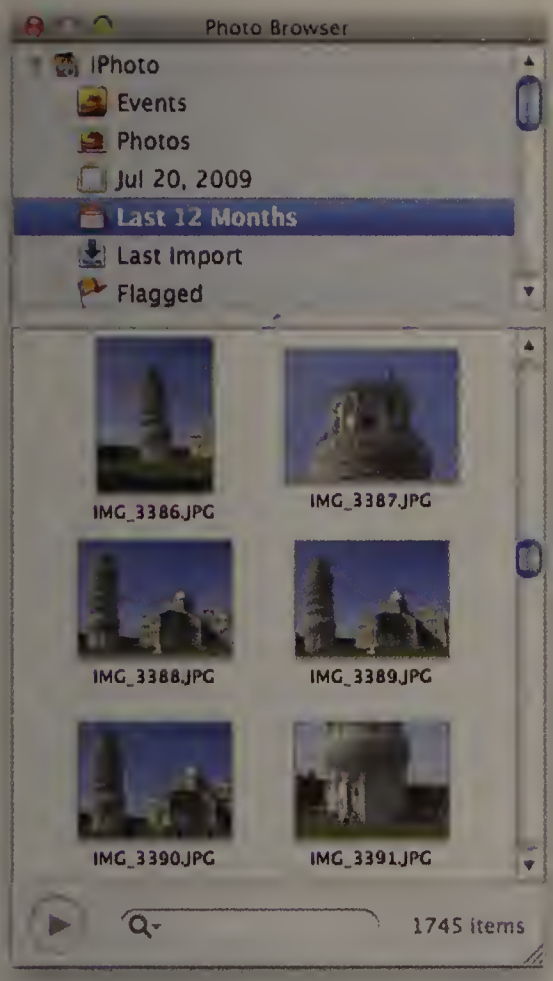


Photo Browser Want to attach an image to an e-mail message? Use Mail's Photo Browser to grab a photo from your iPhoto library without launching iPhoto.

Window ▸ Connection Doctor. Mail will then check each of your incoming and outgoing account connections, and display a window with a plain-English description of any problems it found, usually with advice for fixing them.

6. Send Again

Suppose you sent a message to a bunch of people and you later realize that you forgot to include someone. Don't go to the trouble of opening the message in your Sent mailbox, copying its contents, and then pasting the text into a new message. Instead, just select the message, choose Message ▸ Send Again (⌘-Shift-D), and replace the existing recipients with the new one(s). The subject and message contents remain the same as before, although you can edit them if you like.

7. Remove Attachments

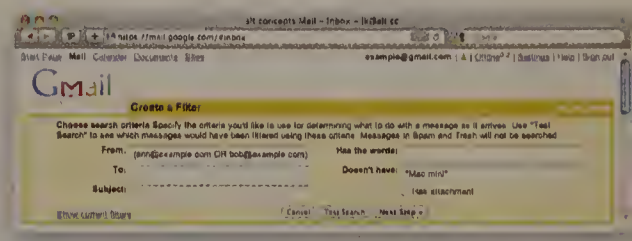
Attachments—whether in messages you've received or copies of outgoing messages in your Sent mailbox—can chew up a lot of disk space. For IMAP or Exchange accounts that impose a storage quota, this can become a significant concern. Luckily, Mail can remove attachments from stored messages. If you've already saved a copy of the attachments elsewhere, using this feature is a good idea.

Locate one or more messages with attachments and choose Message ▸ Remove Attachments. Behind the scenes, Mail duplicates the message (omitting attachments) and deletes the original one.

Senior Contributor **Joe Kissell** is the senior editor of TidBits and author of numerous e-books about OS X.

Knomo Prague Laptop Bag

Made from a measured mixture of nylon and patent leather, Knomo's $295 Prague Patent Black (macworld.com/5429) is a slick, designer laptop bag for urban commuters. The bag provides an ample array of pockets: On the outside are two large pockets and one smaller, zippered pouch; inside are a lightly padded laptop section, a large area for papers, reports, and books, and three smaller compartments for miscellaneous items. An optional clip-on shoulder strap is also included. The Prague is built for style, not heavy-duty action. The soft, padded sides of the bag will cushion your computer against minor bumps and knocks, but nothing more. Still, you'll find that the bag offers sufficient protection for commuting to work and home again.—HEATHER KELLY



Filter Gmail Messages

By Joe Kissell

Google's Gmail (gmail.com) e-mail service offers a basic but highly useful filtering system. Filters can, for example, apply a label to all messages with a certain word in the subject, or from a certain sender; they can also archive messages (clearing them out of your Inbox), mark them as read, and take other actions. Although these filters aren't as powerful as the rules features in desktop e-mail programs, they have the advantage of being able to pre-sort your mail even when you're checking your messages in a Web browser or on an iPhone or other mobile device that doesn't have its own filtering capability.

To make a filter, click the Create A Filter link near the top of the Gmail window. Enter search terms in one or more of the fields shown. To limit matches to messages with attachments, select the Has Attachment checkbox. Click on Next Step, and then select one or more checkboxes representing the action to take when a message matches. After making your selections, click Create Filter.

The criteria you specify can be more elaborate than simple words, phrases, or addresses. For example, you can use Boolean operators. To match a message from any one of three people, enter something like this in the From field: `(ann@example.com OR bob@example.com OR cal@example.com)`. Or, to search for a whole phrase rather than any message containing all the individual words in the phrase, put your search terms in quotation marks. For more tips go to macworld.com/5426.—JOE KISSELL

BENTO 3

Database program adds iPhoto integration and database sharing

By Jeffery Battersby

REVIEW FileMaker's Bento gets its name from the Japanese lunch box that's divided into separate compartments for the different portions of your meal. Like its namesake, Bento helps you keep your data in orderly compartments, but it also helps you mix, match, and update data from several sources. Version 3 of Bento adds new features to help you better organize your data, including integration with iPhoto, the ability to share data with others on your local network, and 128-bit AES encryption for securing your data. Bento 3 is a significant and worthwhile upgrade.

Organize iPhoto Images Bento 3 lets you better organize your iPhoto images and link them to your other Bento libraries.

Photo Mojo

Bento lets you catalog, organize, and link your photos to other information. The program's iPhoto connection shines when you link it to another Bento library. For example, if you're a photographer who uses Bento to track customers and the photographs they purchase, all you need to do is drag your iPhoto library to the Bento form you use to track contacts. Bento links the two libraries together. Using that link you can easily match your customers with the photos they've purchased, and include the dates the photos were purchased and the prices paid, giving you better insight into which of your customers have purchased what.

Sharing and Security

Bento lets you access, update, and sync your data by using the Bento iPhone application. The program also offers you the option of sharing your entire database or a few select libraries with up to five users on your local network. You can choose to allow anyone opening a shared file to edit and update all the data, excluding iCal events and to-dos, and you can also limit access to an entire database or specific fields—such as a customer's credit card information—by using Bento's new password and encryption options.

Encrypted fields display bullets instead of text and, when the fields are locked, cannot have data entered into or copied from them. You can lock your database when you step away from your computer and require a password every time you open the database.

Bento's field-level security options work quite well; unfortunately, though, they allowed me to leave my database unlocked and available to everyone on my network even though I thought it was properly secured. This is because, with the exception of secured fields, Bento's database password secures the database only on the host computer. To secure your database over a network you need to make sure you set a password in Bento's Sharing preference (Bento ▸ Preferences ▸ Sharing).

The Little Things

Version 3 also adds several small but useful changes to Bento. First, there's Bento's new Template Exchange, an online collection of 250 free Bento templates submitted by Bento users. An improved theme browser includes ten new themes. Also, there are folders for grouping and organizing libraries, as well as custom icons you can use for your libraries, and you have the option to use Bento to send e-mail to more than one recipient at a time. But Bento also has surprising omissions: You can't print labels, and you have no pixel-level control over the fields you use on your forms.

Macworld's Buying Advice

Bento remains the premiere database application for the small office/home office and home user. The addition of iPhoto integration, database security, database sharing with up to five users, and a multitude of new templates and themes make Bento a far more versatile database with more options for the small-business owner. But it also omits some very obvious and basic tools, like label printing.

PRICE: $49 | **COMPANY:** FileMaker, www.filemaker.com

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Reviews

WHAT WE'RE REVIEWING ONLINE THIS MONTH

HARDWARE

CalDigit VR Mini △

CalDigit's VR Mini is an external storage device with a creative design. An orange LCD screen displays basic information about the drive and gives it a distinctive look. The VR Mini is slightly heavier and bulkier than its competitors—you could fit it into a backpack, but not a pants or shirt pocket. Instead of using a single drive mechanism, it uses 2.5-inch drive mechanisms that are mounted in two removable modules. Using the RAID 1 feature, you can protect data by mirroring it on both drives. You can also use the standard RAID 0 configuration or set the drive up without RAID. The VR Mini is one of the fastest external hard drives we've tested and has a bundle of great features to offer its users, especially those who do audio and visual work. However, it also comes at a steep price (macworld.com/5396).

●●●●; 640GB, $629; CalDigit, www.caldigit.com

Targus Wireless Mouse for Mac

Designed to appeal to the Apple aesthetic, the Targus Wireless Mouse for Mac will draw comparisons to Apple's Wireless Mighty Mouse. And while it's a usable optical mouse for general use, the Targus mouse, like the Mighty Mouse, is a device that you'll either love or hate. The innovative Touch Scroll uses a sensor instead of a scrollwheel (or a scrollball, like that found on the Mighty Mouse). It allows for only four-directional movement—up, down, left, and right—you *can't* move diagonally. This might be enough to turn you away, but if you've only used mice with scrollwheels that are limited to four-directional movement, the lack of diagonal movement isn't an issue. The left and right buttons are actual buttons that have a nice feel when clicked. The Touch Sensor is also a button. Along the left side of the Targus mouse is a togglelike button that serves as two buttons. All of these buttons are programmable (macworld.com/5430).

●●●; $50; Targus, www.targus.com

Verbatim SureFire FireWire 800/USB △

Verbatim's SureFire FireWire 800/USB is an unassuming, speedy drive that's slightly wider and taller than an iPhone. It weighs less than half a pound, making it one of the lightest portable hard drives we've reviewed. The black aluminum, 5400-rotations-per-minute SureFire comes preformatted for the Mac and is therefore Time Machine–ready out of the box. It produced fast times in our Speedmark tests, besting most other external drives in data reading and writing. The SureFire has FireWire 800 and USB 2.0 ports. It also comes with a FireWire 400 cable and a USB power cord. A three-year limited warranty only enhances this drive's value as an attractive and inexpensive option (macworld.com/5431).

●●●●; $180; Verbatim, www.verbatim.com

SOFTWARE

CodeWeavers CrossOver Mac Pro 8 △

Yes, you can run Windows programs on your Mac through either Apple's Boot Camp or a virtual machine application. But CodeWeaver's CrossOver Mac Pro 8 offers a faster alternative. It creates a virtual environment that lets you run Windows applications and games on your Mac without having to load the Windows operating system. With CrossOver 8 installed on your Mac, you can insert a Windows-version installer disc—for, say, Microsoft Internet Explorer 7, Microsoft Office 2007, Quicken 2009 for Windows, or Valve's Left 4 Dead game—install the program, and run it. CrossOver Mac Pro 8 relies on the open-source Wine application for running Windows programs, and it streamlines the install process. However, the new version adds support for only one major, new Windows application (Quicken 2009), and it merely tweaks Office

PRODUCT WATCH

HARDWARE

My Book Studio, from Western Digital (www.wdc.com): Small, sleek external hard drive features 256-bit hardware encryption ($190 to $300, depending on size).

PowerLite Presenter, from Epson (www.epson.com): Projector includes a DVD player, a pair of 10-watt speakers, and a USB port for connecting digital camcorders and more ($900).

SOFTWARE

BusyCal 1.0, from BusyMac (www.busymac.com): Calendaring program syncs with others on LAN or with Google Calendar ($40 per computer).

Stuffit Deluxe 2010, from Smith Micro Software (store.smithmicro.com): Venerable file-compression tool's "cloud-based" service lets you share large files more easily ($80).

Find It Online
For expanded reviews, type the blue URL at the end of each summary into your browser's address bar.

2007 compatibility bugs. CrossOver can solve your cross-platform problems… if it supports the program you're interested in. Make sure of that before exploring CrossOver further (macworld.com/5432).
♦♦♦; $70; CodeWeavers, www.codeweavers.com

OmniOutliner Professional 3.9.1 △

OmniOutliner Professional 3.9.1 is the best outlining and list-management tool on the market. The Omni Group has added an array of enhancements since version 3.0. This version adds an autosave feature, to protect your documents, and supports OS X's Quick Look to make previewing OmniOutliner documents and their attachments easier. The program also supports LinkBack, an open-source framework for embedding content from one application in a document of another app. Double-click on LinkBack content to open it in the originating application; any changes you make automatically show up back in OmniOutliner. The program can export to Microsoft Word 2008's *.docx* format and does an admirable job of rendering outlines for Word despite significant differences between the two programs. The only disappointment with this new version is that the program documentation doesn't reflect the changes in this update (macworld.com/5433).
♦♦♦♦½; standard, $40; professional, $70; The Omni Group, www.omnigroup.com

Top Products

YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED

HARD DRIVES
Desktop

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
Professional Quad-Interface (pictured); www.verbatim.com	♦♦♦♦	$171 (1TB)	quad interface	4963
Rocpro 850 www.rocstor.com	♦♦♦♦	$130 (500GB)	quad interface	5397
CalDigit VR Mini www.caldigit.com	♦♦♦♦	$664	quad interface	5396

HARD DRIVES
Portable

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
Mercury On-the-Go (pictured) www.macsales.com	♦♦♦♦½	$102 (320GB)	quad interface	4258
eGo Mac Edition www.iomega.com	♦♦♦♦	$130	triple interface	5219
G-RAID mini2 SSD www.g-technology.com	♦♦♦♦	$2199	quad interface, SSD	4766

MONITORS
Widescreen

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
324 LCD (pictured) www.lacie.com	♦♦♦♦½	$899	24-inch display	3896
LP3065 www.hp.com	♦♦♦♦	$1140	30-inch display	2509
MultiSync LCD3090WQXi www.necdisplay.com	♦♦♦♦½	$2000	30-inch display	3770

PRINTERS
Laser

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
C544DN (pictured) www.lexmark.com	♦♦♦♦½	$463	LED, color	4356
C6150dn www.okidata.com	♦♦♦♦½	$767	LED, color	3899
HL-4070CDW www.brother-usa.com	♦♦♦♦½	$402	PostScript-compatible	3385

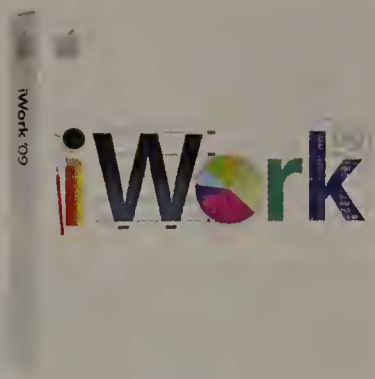
PRINTERS
Multifunction

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
Color LaserJet CM1312nfi (pictured) www.hp.com	♦♦♦♦	$386	laser	5183
Artisan 800 www.epson.com	♦♦♦♦½	$162	laser	5010
LaserJet M1319f www.hp.com	♦♦♦♦	$146	inkjet, monochrome	5480

[A] All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. [B] In a browser's address field, typing a find code after *macworld.com/* takes you to a product's review or overview.

Business Center

NEWS AND ANALYSIS ABOUT MACS IN THE WORKPLACE



iWork Update Delivers Fixes

Apple's iWork '09 9.0.3 includes fixes for suitewide problems as well as for the individual programs that make up the suite.

For all iWork programs, the update improves image handling when you reduce the file size of images that have Instant Alpha applied. (Instant Alpha was introduced in iWork '08; it lets you make image backgrounds transparent without having to use a third-party image editor such as Photoshop.) In addition, the update improves file-size management when you insert some movies.

The Keynote update improves the reliability of guides in the presentation program. It also fixes a number of issues with charts. For example, pasting multiple cells containing duration or date/time values into the Chart Data Editor previously would paste only zeroes. Other Keynote-specific fixes include tackling a bug in which a laptop battery would run out of power when the laptop was playing a presentation.

Apple's page-layout program, Pages, and spreadsheet program, Numbers, also get several bug fixes. For example, previously some Numbers formulas stopped working after you formatted a cell.

Use Software Update (Apple menu ▸ Software Update) to download iWork 9.0.3, and find more details on Apple's Website (macworld.com/5436) about all the problems the update resolves.

—PHILIP MICHAELS

Intuit Readies New Version of QuickBooks

Intuit's $200 QuickBooks 2010 (macworld.com/5435) adds features that have been noticeably missing from the application in recent years.

QuickBooks 2010 will run on OS X 10.5.7 and later versions, including Snow Leopard. Timesaving changes include the ability to e-mail statements, refinements to the batch e-mail feature, and a date picker that helps you enter dates when filling in forms. The Company Snapshot feature, which gives a real-time view of a business's financial picture, is now customizable.

Tackling a major omission in past versions, Intuit will let users accept credit and debit cards from within QuickBooks by using Intuit Merchant Service for QuickBooks for Mac. The integrated add-on service costs $20 a month. Similarly, QuickBooks 2010 works with the $25-per-month Intuit QuickBooks Payroll for Mac add-on to process payrolls. The free MyTime add-on tracks billable time, generates timesheets, and sends invoices.

Intuit's critics are sure to notice that the Mac version of QuickBooks 2010 is missing features found in the Windows version. It lacks online bill pay, there's no multiuser support, and it's missing the Intuit App Center.**—PHILIP MICHAELS**

Google Docs 'Widely Used' at One in Five Workplaces

Microsoft Office's near-total dominance in the workplace may be facing a serious challenge from Google Docs, according to a new survey by market research firm IDC. The study finds that about one in five companies reported that the server-based office application is "widely used" in their workplace—however, possibly as a complement to Microsoft Office.

IDC surveyed 262 people, a significant number of whom are senior managers at businesses of various sizes. A similar survey conducted by IDC in December 2007 found that 5 percent of those surveyed reported Google Docs was "widely used" at their workplace. IDC's most recent survey, done in July, found wide use of Google Docs in 19.5 percent of companies surveyed.

"Google Docs is not yet supplanting Microsoft, but the fact that Google Docs is being picked up so quickly shows tremendous momentum, and that's a huge threat to Microsoft," says Melissa Webster, the IDC analyst who conducted the survey.

Despite Google Docs' growth, Microsoft Office's use in the workplace was essentially unchanged in this survey, with more than 97 percent of those surveyed reporting that Office remains widely used. This indicates that workers are actually using both tools.

Webster warns that the increasing use of Google Docs may make it harder for Microsoft to succeed with its own Web-based tools.

—PATRICK THIBODEAU

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CLEAN UP YOUR iTUNES LIBRARY

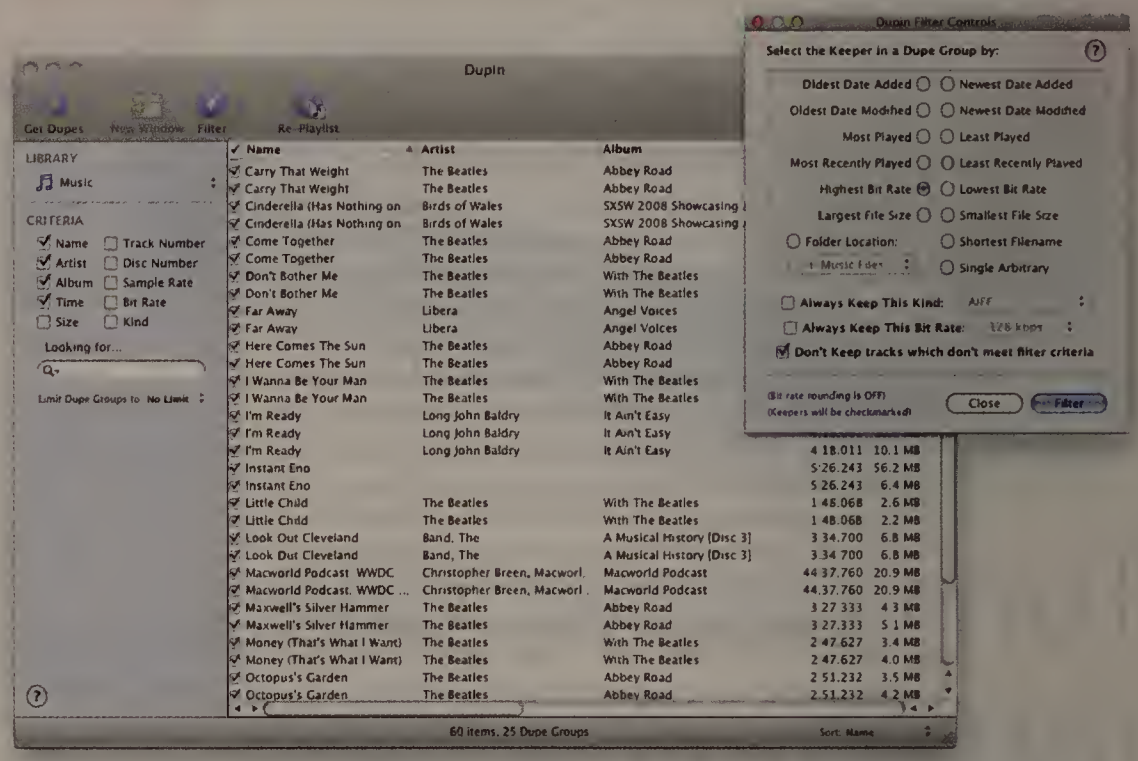
Remove duplicate tracks, fix mistagged songs, and more

By Christopher Breen

If you were an early adopter of digital music, from back in the days of Casady & Greene's SoundJam through the birth of iTunes, your iTunes library is probably untidy at best—strewn with duplicates, mismatched tags, and missing or incorrect album artwork.

iTunes offers very little help in this regard—just a limited Show Duplicates command, which separates twin files by track title and artist only. If you have a track that includes studio, live, outtake, and remix versions, iTunes is likely to term them all duplicates. This is not very helpful unless you enjoy sifting through long lists of tracks so that you can toss the few true duplicates.

No, for this kind of job and others—such as correcting ID3 tags and supplying accurate cover art—you need better tools, such as the ones I discuss here.



Dupin When it comes to locating and weeding out duplicate tracks in iTunes, Doug Adams's Dupin does a great job. It can even consolidate play, skip, and ratings information from the duplicate tracks.

Dupin

Among geekier Mac iTunes users, Doug Adams is legendary for his Doug's AppleScripts for iTunes Website (dougscripts.com/itunes). If something can be done to iTunes or an iPod via AppleScript or Automator, odds are Doug offers the way.

Doug's $15 Dupin (macworld.com/5502) helps you locate and weed out duplicate tracks. Dupin filters an iTunes library by using a broad set of criteria including Name, Artist, Album, Time, Size, Track Number, Disk Number, Sample Rate, Bit Rate, and Kind. Once it finds duplicates based on these choices, it gives you a variety of ways to determine which tracks to keep—most recently played, highest bit rate, and newest date added, for instance.

Unlike iTunes, Dupin can search individual playlists as well as your entire library. A new addition to the program is the ability to consolidate play, skip, and ratings information from the duplicate tracks into the track you intend to keep.

Song Sergeant

LairWare's $20 Song Sergeant (www.lairware.com) not only goes after duplicate tracks but also locates tracks with inconsistent artist and album names, as well as *orphaned* tracks—those that are still in your iTunes library folder (or the folder you've told iTunes to use for storage) but that iTunes no longer keeps track of. (This can happen when you delete tracks from iTunes but don't follow through and trash them.)

Song Sergeant uses fewer search criteria than Dupin—Track Title, Artist Name, Duration, Album Title, File Kind, and File Size—but those criteria should be enough to locate most, if not all, of your iTunes library's duplicate tracks. Song Sergeant prioritizes tracks in two ways. The first is by their ID3 tags—most complete, most played, most recently played, and so on. You also filter audio data by highest quality, lowest quality, highest rating, longest duration, closest to a specific quality level, or by file type (AAC, MP3, AIFF, WAV, Apple Lossless, or Protected).

When the program identifies duplicates, it automatically selects tracks based on the filters you've set. You're welcome to choose those that you believe aren't duplicates and then click Merge Marked to remove the duplicate files. (Duplicate

tracks can be sent to the Trash or to a folder you designate.) The "merge" part of this command means that if a duplicate has better tagging than the version you want to keep, that information will be merged with the kept track.

The program's Inconsistent feature helps you assign consistent names to albums and artists—'The Rolling Stones' versus 'Rolling Stones', say. Song Sergeant will offer a preferred name, though you can overrule it. When names are to your liking, click Rename Selected As Preferred.

As for orphan files, choose the ones you want to add to iTunes and click the Add Selected To iTunes button. Select those you don't want and click Trash Selected.

TuneUp

TuneUp, from TuneUp Media (www.tuneupmedia.com; lifetime license, $30; yearly license, $20), is an iTunes utility of a different stripe. Rather than looking for duplicate and missing files, it attempts to clean up your tracks by locating and applying the correct tags and album art to them.

To start, click the Analyze icon, and TuneUp will scan your music library and give you some idea of the state of its tags—incorrect track artists, track names, album names, genres, year, cover art, and track number. To begin cleaning up your library, select the Clean option and drag up to 500 tracks at a time into the TuneUp window that attaches itself to the right side of the iTunes window. TuneUp connects to the TuneUp server—which uses GraceNotes' database to analyze and properly tag your tracks—and begins analyzing your music's metadata.

Track analysis takes about two to three seconds per track. When TuneUp finishes analyzing the tracks, it groups them into three categories, separated by album—Matches (those it's darned sure about), Likely Matches (those it's pretty sure about), and Not Found (those it's stumped by). You can accept all its changes in a particular category by clicking Save All, or you can save or reject each entry individually. For each album entry, you can see which tracks are in your iTunes library (and which are missing) and choose alternate cover art if you feel TuneUp hasn't picked the right artwork. If you discover that an album is missing tracks, just click the arrow next to a missing track and you are transported to the iTunes Store, where you can preview and purchase the track.

Speaking of cover art, TuneUp has a separate function that looks for tracks that are missing artwork. I've had mixed luck with this feature. Each year I download multiple gigabytes of SXSW showcased artist tracks, and, as many of these bands are obscure, TuneUp's cover art suggestions can be way off base. Unfortunately, there's no way to tell TuneUp to search just specific playlists for missing artwork (all my non-SXSW tracks, for example).

TuneUp also includes a Tuniverse feature that links to related YouTube videos, bios, album recommendations, concert tickets, and merchandise (offered through eBay) for the currently playing artist. And a Concerts tab displays concert dates and venues for artists in your iTunes library who are playing locally in the next couple of months. Each artist name links to JamBase.com, a concert information Website. Additionally, some listings include direct links to Stubhub and Ticketmaster.

TuneUp Rather than look for duplicate and missing files in your iTunes library, TuneUp locates and applies the correct tags and album art to them.

Meet Nook, Barnes & Noble's E-book Reader

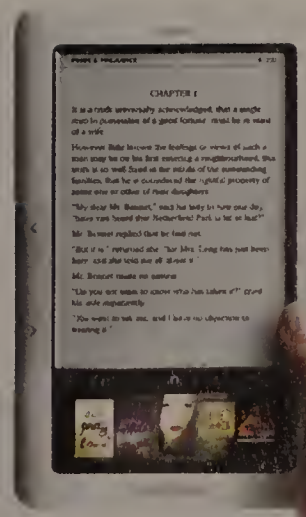
By Scott McNulty

Barnes & Noble has entered the e-book market with the Nook (www.barnesandnoble.com/nook), a device that aims to compete with Amazon's Kindle. It's the first dedicated e-book reader powered by Google's Android operating system. The $259 Nook should be available by the time you read this.

The Nook has a 6-inch-diagonal E Ink display, and beneath it there's a 3.5-inch color LCD screen for navigating books via a Cover Flow–like interface, displaying an on-screen keyboard, and generally operating the device. The Nook comes with 2GB of internal memory, which Barnes & Noble says will hold about 1500 e-books, though that limit can be expanded by using the included Micro SD slot.

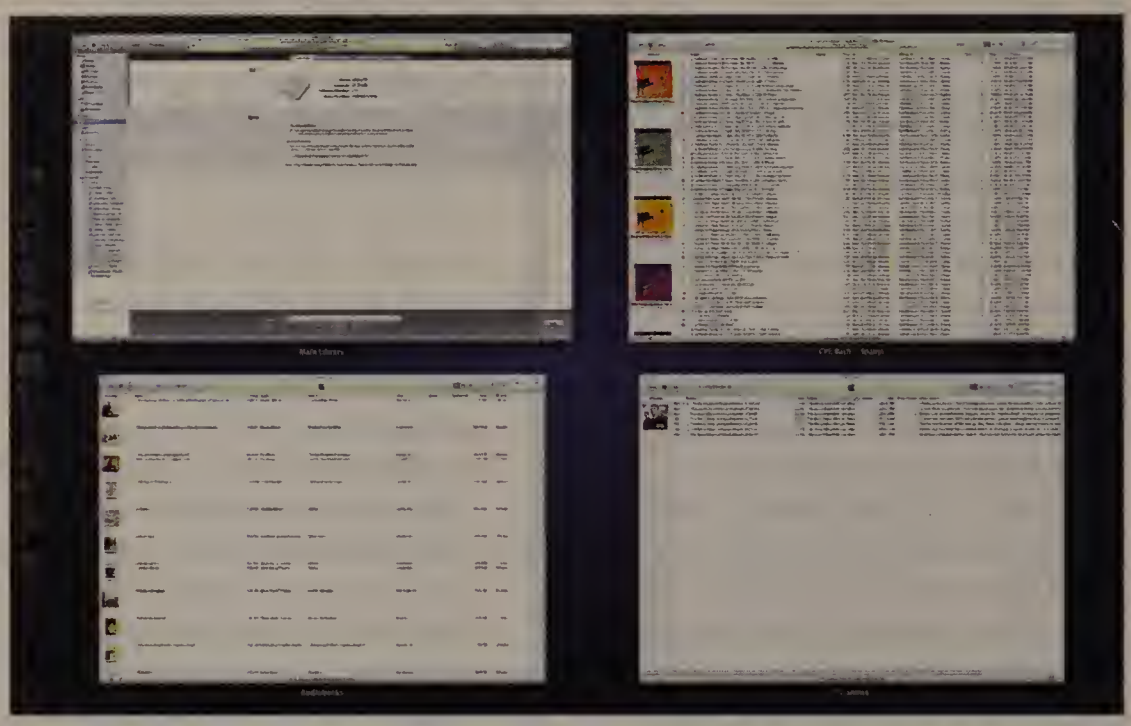
The Nook is bundled with 3G access so you can download content wirelessly, plus the device includes Wi-Fi connectivity and access to free Wi-Fi in all of Barnes & Noble's stores. Barnes & Noble boasts more than a million titles, and the reader software comes in versions for Macs, PCs, iPhones, and other smartphones.

But not all is well—Cupertino-based Spring Design (www.springdesign.com) has filed a lawsuit against Barnes & Noble over the use of its e-book intellectual property. It seems that Spring Design had been working on the same dual-screen concept since 2006, filing patents along the way. It has released its own Android-based reader called Alex. Stay tuned.



WORKING WITH iTUNES WINDOWS

By Kirk McElhearn



Multiple Windows Why limit iTunes to just one window when it can do so much more?

Most people see iTunes as a single-window program: When you click an item in the sidebar, the main window's content changes. But you may not realize that iTunes lets you use multiple windows, each for a different purpose. Here's an overview of what you can do with iTunes windows.

You can open any item in the sidebar (other than devices or the Music library) in a new window by double-clicking its icon, or by Control-clicking and choosing Open In New Window. This allows you to more easily look at multiple playlists, and to copy music from one playlist to another more flexibly: You can drag songs into specific locations in other playlists, instead of just adding them to the ends of each one. If your windows are small enough—or your screen is large enough—you can just drag from one playlist window to another. But you can also use Exposé: Select one or several tracks, start dragging them until you see a small green plus (+) icon, then invoke Exposé's Application Windows function (by default, press F10). Keep holding your mouse button down; you can now move your cursor over another window, release the Exposé key, and drag the tracks to where you want them.

Any windows you have open when you quit iTunes will reopen the next time you launch the program, so you could, for example, always keep the iTunes Store open in a separate window if you wish.

iTunes lets you choose whether to use its own window to play back videos or to view them in a new window. In iTunes' Playback preferences, you can choose video playback options for music videos, and for movies and TV shows. You can choose to play videos in the artwork viewer, in the main iTunes window (filling the window), in a separate window, in full-screen mode, or full screen with visuals (which works only with playlists that contain both videos and music).

In addition to opening the iTunes Store in its own window, you can also choose to have it automatically fill the iTunes window whenever you click it. Go to the Store preferences and select the Use Full Window For iTunes Store option. When next you click iTunes Store, the sidebar will slide out of the way.

Apple Releases Apple TV 3.0 Software

By Jonathan Seff

Just when it seemed like Apple was ready to let the Apple TV slip quietly into the sweet hereafter, the company went ahead and released a new version of the software that powers the home media device.

The highlight of the Apple TV 3.0 software update is a new main menu interface that provides direct access to rented and purchased movies, TV shows, music, podcasts, photos, and YouTube videos. Your content (My Movies, My TV Shows, and so on) now floats to the top of lists instead of sinking to the bottom. Once you drill down into secondary menus, however, the interface is the same as before.

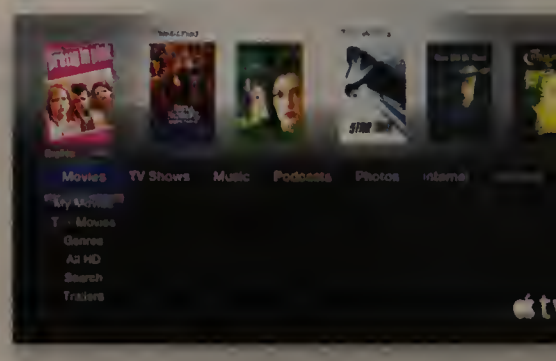
The new software also enables Apple TV users to enjoy iTunes LP and iTunes Extras content for albums and movies, respectively—although if you own any, you'll need to download updated versions when Apple makes them available.

The Apple TV now supports Genius Mixes as well, a new feature of iTunes 9 that also works on some iPod models.

For photos, the latest software adds support for iPhoto '09's Events and Faces (though not Places) features.

Finally, you can now listen to thousands of Internet radio stations and tag ones you like for later listening. (You could listen to Internet radio on the Apple TV previously, but it wasn't easy).

The update is free to all Apple TV owners, and requires iTunes 9.0.2.



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"Of all the Bluetooth accessories we tested with iPhones this year, solChat 2 offered the best overall performance for its asking price. We were genuinely surprised that such a powerful speaker and microphone set could be squeezed into such a small enclosure, with full voice prompting and iPhone 3GS voice command support - features not found on many competing products. solChat 2 is a very impressive little speakerphone!" iLounge

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Reviews

HOME ENTERTAINMENT HARDWARE, SOFTWARE, AND ACCESSORIES

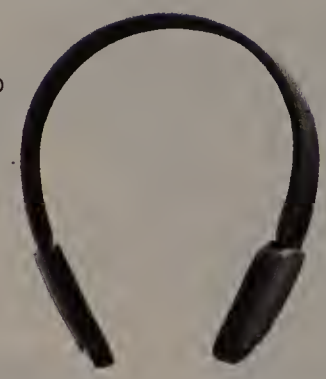
HARDWARE

iHome iP1 △

iHome says that the iP1 iPod speaker dock uses "a complex chip-based algorithm" developed by Bongiovi Acoustics to restore "harmonics, brightness, clarity, and presence" to compressed music while also boosting the bass, and it will accommodate any iPhone and any dockable iPod. All in all, the dock is visually striking, and its digital enhancement of compressed music is helpful with some genres. But there are other speaker docks that produce a more natural sound (macworld.com/5457).

●●●½; $300; iHome, www.ihomeaudio.com

Jabra Halo ▷



Jabra's Halo stereo Bluetooth headphones are sleek, unobtrusive, sturdy, and extremely comfortable. The adjustable band that connects the two earpads goes over the top of your head, instead of resting at the back of your neck. The pads themselves are slim, and the headphones fold up nicely. In fact, folding (or reopening) the two arms of the headband acts as the Halo's only power off/on mechanism, so you always know whether the unit is switched on or off. The Halo delivered impressive music quality. The right-side earpad has just one button for play/pause, and it's very easy to find. The volume and track-skipping controls on the side of the right-side pad were a bit of a pain to use, though. For volume, you have to press the pad with the right amount of delicacy. You can use the Halo to answer your phone calls, too. The main call button, which doubles as the play/pause button, lets you answer a call, end a call, and redial. But the Halo's call quality did not match its music quality. Of course, wearing headphones with earpads doesn't give you the same in-your-ear music experience that the seal from earbuds provides. Still, if you're looking for nonearbud headphones to handle music and calls—but primarily music—the Halo is a good choice (macworld.com/5458).

●●●½; $130; Jabra, www.jabra.com

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Orbitsound T6 △

There's no denying that valve audio amplifiers (also called tube amplifiers) look cool. Orbitsound combines valve amplification with its stereo technology to create the T6, a unique iPod dock and speaker system. The T6's speaker is about the size of a typical bookshelf-size speaker, except that there's only one unit instead of a pair. For some audiophiles, having just one speaker may be a psychological barrier. But fear not, because the T6 uses Orbitsound's AirSound technology, which creates stereo audio from a single speaker, with the aim of delivering more natural sound. The valves are used as the first stage of preamplification, and while they're predominantly eye candy, they may help to produce warm, lush audio. The T6 has a unique look, and its smaller size means that it doesn't quite reach the sonic heights of larger speakers. That said, Orbitsound's approach to stereo is refreshing, and the T6 is a lovely sounding unit (macworld.com/5455). ♦♦♦♦; $300; Orbitsound, www.orbitsound.com

iPods: Current Lineup

PRODUCT	SPECS	RATING	PRICE[A]	DISPLAY	PERFORMANCE	FIND CODE[B]
iPod Classic	160GB	♦♦♦♦	$249	2.5-inch color	36 hours of music playback; 6 hours of video playback	5262
iPod Touch	8GB	♦♦♦♦	$199	3.5-inch color	36 hours of music playback; 6 hours of video playback	3864
	32GB	♦♦♦♦½	$299	3.5-inch color	36 hours of music playback; 6 hours of video playback	5257
	64GB	♦♦♦♦½	$399	3.5-inch color	36 hours of music playback; 6 hours of video playback	5258
iPod Nano	8GB	♦♦♦♦½	$149	2.2-inch color	24 hours of music playback; 5 hours of video playback	3867
	16GB	♦♦♦♦½	$179	2.2-inch color	24 hours of music playback; 5 hours of video playback	3868
iPod Shuffle	2GB	♦♦♦	$59	none	10 hours of music playback	5267
	4GB	♦♦♦	$79	none	10 hours of music playback	5268

[A] All prices are Apple's prices. [B] In a browser's address field, typing a find code after macworld.com/ takes you to a product's review or overview.

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Macworld Hot Stuff

WHAT WE'RE RAVING ABOUT THIS MONTH

Sik Pimp

No, that's not a typo in the name; Sik's $55 car charger for iPods really is named Pimp. It's the successor to the company's older Imp (although that doesn't really explain why Sik went with Pimp instead of, say, Imp 2). The aluminum-and-stainless-steel Pimp plugs into your automobile's accessory jack and provides safe, conditioned power to your iPod via a three-foot cable. But the Pimp's aluminum dock connector also provides a true line-level audio output, letting you get the best sound quality from your iPod to your car's stereo—assuming, of course, that your car's head unit has an audio-in jack. The Pimp weighs in at only 1.5 ounces, and works with all models from the fourth-generation iPod on—except, of course, for the dock connector-less iPod shuffle (www.sik.com).—**DAN FRAKES**

Power Support Hello Kitty iPod Cases

Looking for the perfect gift for a preteen—or looking to reminisce about your own preteen years? Power Support offers a number of officially licensed iPod nano, iPod touch, and iPhone cases sporting Sanrio's Hello Kitty character (ranging from $30 to $40). The iPod touch cases feature various smaller Hello Kitty designs on a white, black, or clear Crystal Jacket shell. The iPod nano cases come in only clear Crystal Jacket shells—to show off the nano's bright colors—with either a large Hello Kitty or the character's trademark bow wrapped around the case. Each case also includes a Power Support crystal film to protect your device's screen (www.powersupportusa.com).—**DAN FRAKES**

Agent 18 StandHear

The iPod touch and iPhone are great for watching movies on long flights. But unless you want to hold the player, you need a stand. And unless you want to share your earbuds with your seatmate, you need a headphone splitter. Agent 18's clever $25 StandHear gives you both. Flip up one side and you've got a stand with four different angles. Inside is a short cable that you plug into your headphone jack; on the front are two jacks (www.agent18.com).—**DAN FRAKES**

Kanex Mini DisplayPort to HDMI Adapter

Kanex's $70 adapter takes the digital audio and video from a Mac and runs it through an HDMI cable to an HDTV. The small off-white box has an HDMI port on one end and three cables—Mini DisplayPort for video, USB for power, and Toslink optical—on the other. As a result, it can transfer digital audio streams—good news for people with snazzy home-theater audio systems (kanexlive.com).—**JASON SNELL**

VUZIX WRAP 310

Do you find your iPhone or iPod's screen too small to comfortably enjoy watching video? If so, you might want to check out Vuzix's $250 Wrap 310 video eyewear, which displays high resolution video from your iPod or iPhone via eye glasses that project the equivalent of a 55-inch TV screen at about nine feet away. iPod-compatible eyewear isn't new, but the Wrap 310 is designed to look and feel more like traditional sunglasses—and fit over most prescription glasses (www.vuzix.com).—**JONATHAN SEFF**

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AMAZING IMAGE CAPTURE TRICKS

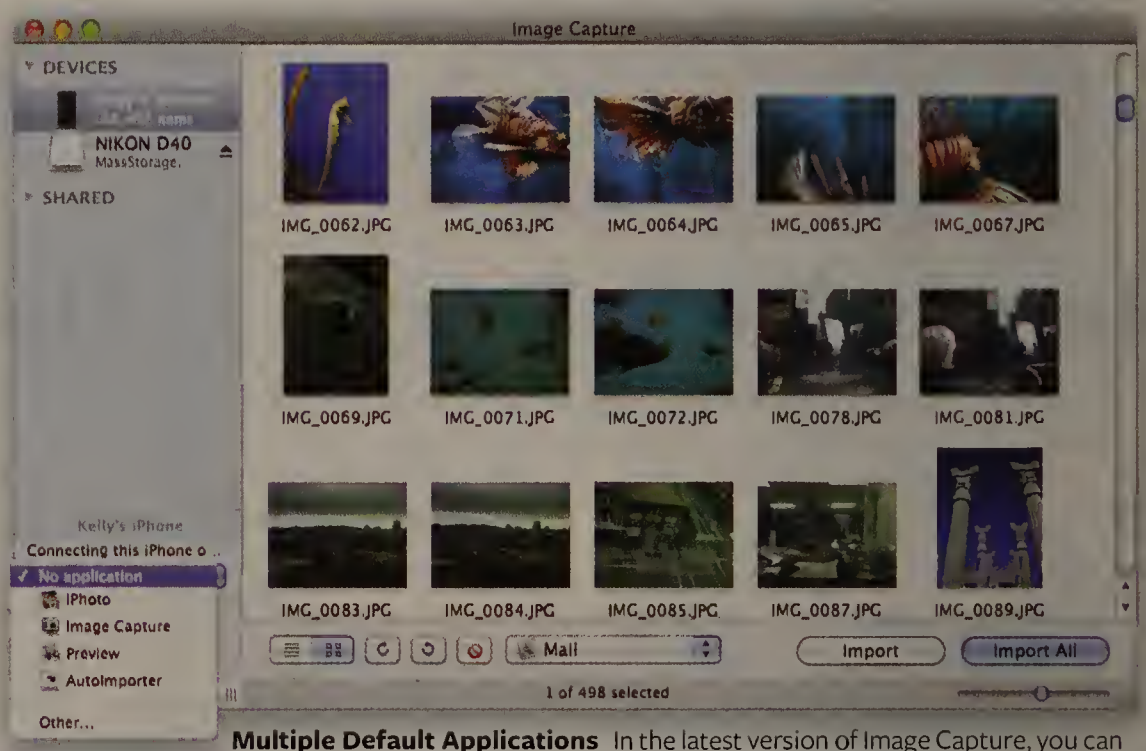
Six surprising uses for Snow Leopard's built-in photo app

By Derrick Story

Image Capture is one of OS X's best-kept secrets. This photo-savvy program does a great job of grabbing a quick shot and performing complex actions without your having to first add the image to iPhoto's library. And in Snow Leopard, Apple has overhauled Image Capture to make it even more useful.

Once you fire up the application, you can connect anything from an iPhone to a Canon 5D Mark II, browse images on the memory card, and then download only the ones you want. You can even have multiple devices connected at once and choose among them.

If you haven't taken a look at Image Capture lately, here are some of the timesaving tricks you're missing out on.



Multiple Default Applications In the latest version of Image Capture, you can set a different default application for each camera, iPhone, or compatible device.

1. Keep iPhoto in Its Place

If you've been plagued by iPhoto launching every time you plug in your camera or iPhone, you can quickly fix the problem in Image Capture.

Launch Image Capture, connect your device, and make sure it's highlighted in the left column. Now choose the photo software you want to use from the pop-up menu at the bottom of the column (see "Multiple Default Applications"). Image Capture lists all of the available photo programs; selecting one will set it as the default application for the camera. You can also choose to have nothing happen when the camera is plugged in.

What's even cooler is that you can set different actions for different devices. If you want iPhoto to launch when you connect your compact camera, for example, but don't want anything to pop up when you plug in your iPhone, Image Capture will take care of it.

2. Grab a Quick Shot

Have you ever come home from an event and wanted to quickly e-mail one or two photos from the day? Even if you use iPhoto, you may not want to go through the whole process of launching the app and importing hundreds of photos you took, just to export one shot.

Instead, launch Image Capture. You'll see thumbnails of all the images on your card. Select the shot you want, use the Import To pop-up menu to specify where you want it saved, and then click the Import button. You'll get the full-resolution photo—along with any metadata and GPS coordinates—in the destination you chose.

Image Capture is one of the easiest ways to grab full-resolution photos off your iPhone. It can also download your iPhone videos, which appear alongside the still photos in Image Capture.

Want to simply e-mail the photo without downloading it? Image Capture can do that, too. Just select the photo, choose Mail from the Import To pop-up menu, and then click the Import button. You'll get an e-mail message ready to send with the photo attached.

3. Sort Your Pictures

Having trouble finding the shot you want? Image Capture lets you change how you sort the images on your device. To access this feature, click the List View icon at the bottom of the Image Capture window. You'll now have access to a whopping 17 columns of data, including Name, Date, File Size, Aperture, and ISO. Click a column to organize your pictures by that criterion. Click a second time to reverse the order. You can now switch back to icon view; your pictures will retain the order.

4. Speed Up Scanning Tasks

In OS X 10.6, Image Capture can control a compatible scanner—even if it's not attached directly to your Mac. For example, I was able to control my Wi-Fi–capable Hewlett-Packard Photosmart C6380 multifunction printer over my network. If you're connecting from afar, the scanner will appear under the Shared heading in the left column. To start a scan, click on the device's name.

To speed things up, try placing a couple of snapshots on the flatbed surface; Image Capture works with the scanner software to detect them when scanning. Select the checkbox next to the Detect Separate Items option and then press Scan. When the scanner is finished, you'll get a preview of your snapshots. If you'd like to refine your scanner settings—including resolution, color, size, rotation, and file format—click the Show Details button. You can even apply image correction and sharpening. Once the scan is complete, you'll end up with individual files for each snapshot.

5. Share Devices over a Network

If you have multiple Macs running Snow Leopard on your network, you can give each of them access to a camera or memory card attached to your Mac. To share your images over the network, connect your iPhone, card reader, or compatible digital camera to your Mac, open Image Capture, and then turn on the Share Camera option at the bottom of the left column (if you don't see it, click on the small upward arrow).

On other networked Macs, your device should appear under the Shared heading in Image Capture. You can browse thumbnails and download any full-size image you want. Unfortunately, it doesn't appear that you can access shared files from previous versions of Image Capture; everyone must be using Snow Leopard.

6. Make a Contact Sheet

Want a quick contact sheet of the birthday photos you just shot? Once your device is connected and you can see thumbnails, select the images you want to include on the contact sheet, choose MakePDF from the Import To pop-up menu, and then click Import.

Once a contact sheet is created, use the Save command to preserve the layout as a PDF. This isn't just any old contact sheet, however. Open it in Preview and you'll see that the resulting PDF contains small but very high-resolution thumbnails of your photos; each image remains sharp even as you zoom in. This means viewers can get up close to see all of the image's details.

Senior Contributor **Derrick Story** teaches photography on Lynda.com and runs a camera club at thedigitalstory.com.

Separate Image Files If you place multiple images on a scanner bed, Image Capture will detect each image and save them as separate files.

New SLR Pushes ISO Limits

By Kelly Turner

Just as the megapixel war is cooling off, Nikon has thrown down a new gauntlet for camera makers with its Nikon D3S. The high-end SLR boasts a light-sensitivity range of up to ISO 12,800, as well as an enhanced mode that further extends the range to the equivalent of ISO 102,400.

The camera's extended ISO settings will be a boon for photographers who need to shoot in challenging low-light situations, such as indoor sporting events and weddings. The low-light performance will also be a plus for videographers; the D3S offers a High-Sensitivity Movie mode that gives you access to the camera's full ISO range while shooting. The D3S captures 1280 by 720 video at 24 frames per second (fps). In addition to its built-in mono microphone, the camera includes a stereo-microphone input for improved audio quality.

Like the D3, the D3S captures photos at 9 fps in the camera's FX format and at 11 fps in the cropped DX format. However, you'll be able to capture nearly twice as many photos in a single burst thanks to the expanded buffer. According to Nikon, the camera can continuously capture up to 82 JPEGs (at Fine quality) and 36 14-bit raw NEF files.

The D3S also adds three sensor-cleaning modes, as well as two CompactFlash card slots. The D3S will sell for $5200 and is expected to ship in late November 2009.

SNAPSHOT Shooting by Moonlight

A few months ago, I found myself in Monument Valley in the middle of the night. Without other light to compete with, the full moon had turned into a powerful light source, creating dramatic shadows in the desert landscape.

With their sensitive sensors, modern DSLRs are ideal for night shooting. Your camera can gather up more light and color information than your eye can, so the camera sees far more detail. In fact, aside from white-balance adjustments, I did very little processing to this photo. However, night photography brings a new set of challenges.

Framing the Shot

To find the scene I wanted to shoot, I looked for interesting plays of light and shadow. I then set up my tripod and went to work trying to frame the shot. One of the trickiest things about shooting in the dark is that you can't see your subject. You may have to peer through the viewfinder for a long time before your eyes adjust. Don't worry if you don't get it exactly right—you'll be able to adjust once you've taken a test shot.

Setting Exposure

Another challenge was finding the right settings. I would have preferred an aperture around f/11 for a broad depth of field, but that would have required a shutter speed of over a minute—long enough that the stars would begin to leave light trails instead of the pinpoints of light I wanted. Longer exposure times can also result in more image noise; as exposure time lengthens, some pixels on the sensor can get stuck and appear in your final image as white dots. To shorten the exposure time, I opened up to f/2.8.

If your camera can display a status readout on the rear LCD, activate this feature. With the camera mounted on a tripod, and light levels low, this is usually the easiest way to see and adjust settings.

Focusing in the Dark

In low light, your camera's autofocus feature won't work—it's simply too blind. This means that you'll have to focus manually—no easy task, since you too will have a difficult time seeing details.

For a landscape shot, it's tempting to simply turn the manual focus ring to infinity. But if you do this, a lot of depth of field will fall beyond the horizon. To ensure that the foreground is sharp, I prefer to focus just a little short of infinity. Note that with most lenses, as you approach infinity, a tiny turn of the lens ring can equate to a big change in focus. So you'll want to make very small moves when you pull back from the infinity mark.

Taking a Test Shot

To quickly test my setup, I set the camera's ISO very high, to 6400. I used the resulting image on the LCD to evaluate my composition and focus, and adjust accordingly. When you're photographing in the dark, I recommend shooting in raw mode, so that you can adjust the white balance later in your image editor.

Taking the Shot

For a final image, I turned my ISO back down to 1600—low enough to provide a clean image without lengthening my exposure time too much—and then took the shot.

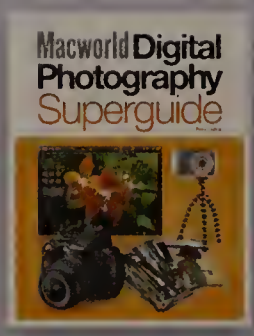
To minimize vibration on long-exposure shots, either use the self-timer or a remote control. If your DSLR offers a mirror lock-up feature, activate that as well. The camera flips up the mirror but doesn't trip the shutter until you press the button a second time.

The Pros and Cons of Long-Exposure Noise Reduction

Some cameras have a noise reduction feature that's tailored to long exposures. Although useful, this feature sometimes requires as much time to process the shot as it took to shoot it. Check out your camera ahead of time to find out how its noise-reduction feature works. If using it will effectively double your exposure times, you may want to shut it off during very long exposures—or you'll spend a lot of time twiddling your thumbs.—BEN LONG

Share Your Shots

Submit your photo to our *Snapshot* series by e-mailing the shot and a description of how you took it to digitalphoto@macworld.com. We'll feature our favorites on Macworld.com. Winners also get a free copy of our new *Digital Photography Superguide* (macworld.com/superguide).



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Reviews

HARDWARE, SOFTWARE, AND ACCESSORIES FOR MAKING AND MANAGING PHOTOGRAPHS

SOFTWARE

Acorn 2.1 △

Acorn 2.1 is a great low-cost image editor for photographers, bloggers, or anyone who needs a decent amount of flexibility in editing images but doesn't require the power or complexity of a full image editor such as Photoshop. The newest release addresses many of the problems of the early versions, including a finicky Text tool; introduces an improved interface; and adds a host of new tools and filters, including raw image-capture support, rulers, vector shapes, and a custom brush designer. The most interesting new feature is the screen-capture tool, which saves individual elements of your screenshot on different editable layers. Anyone who takes a lot of screenshots for technical writing will love this feature. Acorn 2.1 also offers fairly extensive AppleScript support (macworld.com/5462).

●●●●; $50; Flying Meat, flyingmeat.com

Photoshop Elements 8 ▷

Adobe Photoshop Elements is one of the best bargains in the photo-editing market: for a fraction of the cost of Photoshop, you get a full complement of editing tools, guided tutorials for improving your photos, and lots of other features aimed at helping you create cards, collages, photo montages, and more. With version 8, Adobe hasn't made radical changes: The company has added a few new tools, beefed up the Guided Edit and Quick Edit modes, and adopted some of the look of Photoshop CS4. The Smart Brush and Recompose tools are true winners that will make editing your photos quicker and more fun. And many smaller features will add up to a better application. Overall, it's a solid, if light, upgrade to an already good product (macworld.com/5463).

●●●●½; $100; Adobe, adobe.com

HARDWARE

Canon PowerShot SD780 IS ▷

One of the more fashionable point-and-shoot cameras on the market, the sleek PowerShot SD780 IS isn't just a looker. It also performs very well, with great image quality, a powerful flash, nice high-ISO shots in low light, a great selection of scene modes, and excellent optical image stabilization. The 12-megapixel camera garners high scores for color accuracy and sharpness, and captures 720p HD video. It even offers an optical viewfinder. However, some of its controls may feel small, and you won't find many manual controls (macworld.com/5464).

●●●●; $250; Canon, usa.canon.com

Casio Exilim EX-FH20 ▷

With its 20X zoom and high-speed capture mode, the 9-megapixel EX-FH20 is built to handle action shots, especially when you can't physically get up close to your subjects. In high-speed mode, the camera can capture still images at up to 40 fps and video at up to 1000 fps (resulting in interesting—but soundless—slow-motion video). However, the speed comes with some compromises that may frustrate users looking for more manual control over their camera's settings (macworld.com/5465).

●●●½; $449; Casio, exilim.casio.com

Ipevo Kaleido R7 ▷

Ipevo's Kaleido R7 digital picture frame is beautifully designed for a modern aesthetic. The 7-inch widescreen LCD can swivel on its stand to sit in portrait or landscape mode. The R7 includes the usual media-card slots and USB ports, and it can connect to your Wi-Fi network. You can use the included software to configure photo streams and RSS feeds, connect to online services such as Flickr, or wirelessly stream photos from iPhoto or a folder on your Mac. The R7 includes 512MB of internal memory. Though it seems odd that a frame that looks so state-of-the-art lacks audio and video support, its image quality is very

PRODUCT WATCH

SOFTWARE

CameraBag Desktop, from Nevercenter (nevercenter.com): This program lets you combine one-click photo filters for creative effects ($19).

EasyBatch 1.6.1, from BravoBug Software (bravobug.com): Batch-process tedious photo tasks such as resizing, watermarking, format conversion, and more ($20).

Viewfinder 1.0, from Connected Flow (connectedflow.com): You can use this desktop program to search Flickr's online photo site and limit the results by the photos' licenses (£15).

Picasa 3.5, from Google (picasa.google.com): This iPhoto competitor adds face recognition, enhanced geotagging tools, and improved keywording features (free).

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good and its software is a breeze to use (macworld.com/5466).
●●●½; $149; Ipevo, ipevo.com

Kodak Easy-Share Z915 ▷

Long zoom lenses are rarely found at the bargain end of the point-and-shoot camera market. So the 10X (35–350mm equivalent) optical zoom on Kodak's Z915 is a welcome surprise. The camera also offers a surprising range of manual controls and shooting modes for the price, as well as fast shutter speeds, and it lets you take advantage of all that zoom power while shooting video. Unfortunately, the video quality is nothing to write home about—nor is the battery life. Though the Z915's image quality wasn't the best we've seen, bargain hunters may be willing to overlook this for the high-end features (macworld.com/5467).
●●●½; $200; Kodak, kodak.com

Panasonic Lumix DMC-G1 ▷

Though it's much closer in size to a point-and-shoot camera, Panasonic's DMC-G1 delivers the image quality, features, and some of the shooting experience—including the use of interchangeable lenses—of an SLR. The 12.1-megapixel camera produces very good images even at relatively high ISO settings, supports raw image capture, and features a useful swiveling LCD. But some advanced users may be put off by its electronic viewfinder and lack of video support (macworld.com/5468).
●●●●; $800; Panasonic, panasonic.com

Pentax X70 ▷

If you need to really get up close to the action, Pentax's 12-megapixel X70 should get the job done. The camera features an impressively wide and exceptionally long lens (a 26–624mm equivalent). The X70 is also simple to use, surprisingly lightweight, and super speedy—it can shoot 5-megapixel images at 11 fps. However, its battery life is relatively short and its peformance was a bit sluggish. Image quality is less than impressive, especially when you're shooting at the telephoto end of the spectrum (macworld.com/5469).
●●●; $400; Pentax, pentaximaging.com

Sony DPF-D80 ▷

This 8-inch frame shows off Sony's sleek design sense. In our tests, colors really popped and showed no noticeable distortion. The DPF-D80 includes 256MB of internal memory; however, it doesn't support video or Wi-Fi connectivity. While it displays photos well, at this price, you can get a frame that has more to offer (macworld.com/5470).
●●●; $150; Sony, sonystyle.com

Top Products

YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED

DIGITAL CAMERAS
SLR

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
D90 (pictured) www.nikon.com	●●●●	$1060	12.3-megapixel	4966
EOS Rebel XSi www.canon.com	●●●●½	$599	12-megapixel	3898
E-30 www.olympusamerica.com	●●●●½	$995	12.3-megapixel	4453

DIGITAL CAMERAS
Point-and-Shoot

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
Exilim Zoom EX-Z250 (pictured) www.casio.com	●●●●	$233	9.1-megapixel	4256
PowerShot SD780 IS www.canon.com	●●●●	$195	12.1-megapixel	5241

PRINTERS
Inkjet

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
Stylus NX400 (pictured) www.epson.com	●●●●	$85	multifunction; photo	3940
Photosmart C6380 www.hp.com	●●●½	$108	inexpensive, multifunction	5242
Stylus Photo R1900 www.epson.com	●●●●½	$434	professional photo quality	3649

[A] All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. [B] In a browser's address field, typing a find code after *macworld.com/* takes you to a product's review or overview.

HARDWARE

EOS-1D Mark IV, from Canon (canon.com): This 16-megapixel DSLR includes a new 45-point AF system, a maximum ISO of 102,400, and HD video ($5000).

P-6000 and P-7000 update, from Epson (epson.com): Owners of these multimedia viewers can download a free firmare update to add support for tethered shooting and remote shutter release (free).

PhotoTrackr Mini DPL900, from GiSTEQ (gisteq.com): Carry this small, GPS-enabled USB device with you when you shoot, and it will apply GPS data to your photos once you return to your Mac ($69).

PictureMate Charm, from Epson (www.epson.com): This compact, portable photo printer speeds through 4-by-6-inch prints and includes memory card slots and image-correction tools ($150).

SIGNING ELECTRONIC DOCUMENTS

Use Adobe Acrobat to create a handwritten signature

By Pariah S. Burke

Digital signatures are a legally binding way to affirm your agreement to official PDF documents. The signature can include your name, your e-mail address, information about your organization, and the date and reason you signed the document. Typically, digital signatures are cold, computer-generated text. For an extra touch of personalization, why not use your real handwritten signature as a digital signature? Here's how:

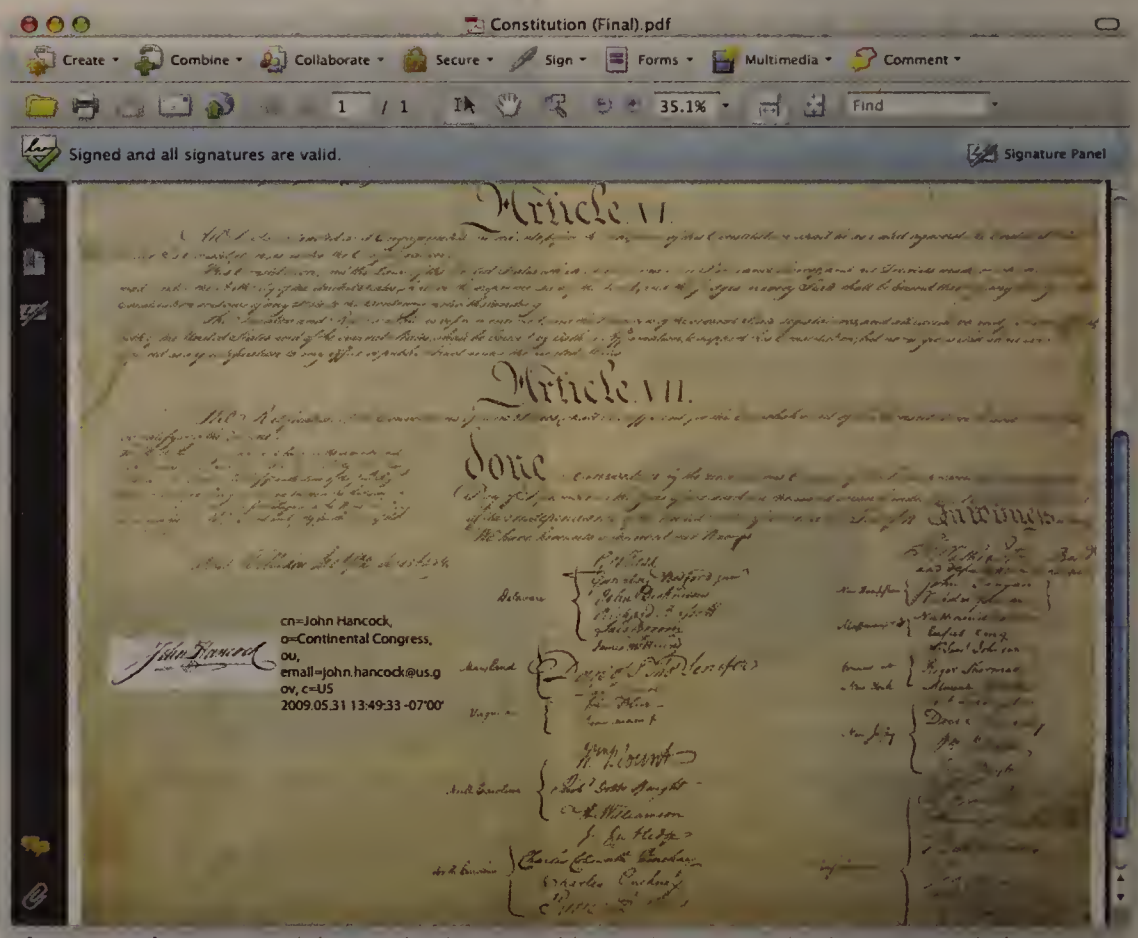
1. Scan your handwritten signature into the computer and save it in PDF format. You can scan directly to a PDF file via the scanner's software or use Adobe Acrobat's File ▸ Create PDF ▸ From Scanner command. Alternatively, you can first scan your signature as a graphic and then convert it to PDF format. Whatever method you use, make sure to crop the graphic to the size of the signature itself. For best results, write your signature a little larger than normal using solid black strokes, such as from a felt tip pen.

2. Once your signature PDF is finished and saved in a permanent location on your hard drive, open Acrobat's preferences and navigate to the Security pane.

3. Beside the Appearance text box, click the New button to open the Configure Signature Appearance dialog box and, in the title field, give your signature a name.

4. In the Configure Graphic section, select the Imported Graphic radio button and click the now-available File button.

5. In the Select Picture dialog box, browse for and open the PDF containing your scanned signature. It will open in the Select Picture dialog box so you can confirm visually that it's the image you want. If so, click OK to return to the Configure Signature Appearance dialog box. Note that your handwritten signature is now a part of the digital signature preview.



Sign Your Signature Adobe Acrobat lets you add your signature to the document with the correct digital ID and signature appearance. These steps work identically in both Acrobat 9 and 8.

6. Fine-tune the appearance of your digital signature by deselecting some of the checkboxes in the Configure Text section or changing options under Text Properties. For an exclusively handwritten signature, for example, uncheck all the boxes in the Configure Text section.

7. When you're satisfied with the result, click OK to save the digital signature appearance, and then OK again to leave Acrobat's preferences.

Note that in the free Acrobat Reader you can sign documents with the digital signature (if that option was enabled in the original Acrobat document), but you cannot create new signature appearances that include images.

Your signature is now ready to use with a digital ID for signing documents.

Digital ID

To make the above signature legally binding, you also need a digital ID. Here's how to create one, if you need it.

1. Open a document you wish to sign and choose Advanced ▸ Sign & Certify ▸ Place Signature. Acrobat will prompt you

to click and drag a rectangle defining the placement and dimensions of your digital signature. Do that at the appropriate place in the document. The Sign Document dialog box will then appear.

2. Choose New ID and, in the Add Digital ID dialog box, select A New Digital ID I Want To Create Now radio button. Click Next and populate the digital ID fields with your information. Note that only the Name, Email Address, Country/Region, Key Algorithm, and Use Digital ID For fields are required.

3. Clicking Next will prompt you to save the digital ID file to a safe, permanent location on your computer and supply a password. Remember your password. You will be required to enter it each time you sign a PDF.

4. Click Finish to save the digital ID and return to the Sign Document dialog box, where you can now select your ID from the Sign As drop-down menu.

5. Beneath the Sign As field, enter the password of the selected digital ID. You may notice that, by default, the digital signature preview depicts a plain-text signature with the distinctive Acrobat logo behind it. This is the Standard Text appearance. Change it to your desired appearance—the one with the handwritten signature—by choosing the name you gave it from the Appearance drop-down menu. The preview should update to match the signature appearance you created.

6. Click the Sign button to digitally sign the document; you'll then be required to save the file.

You now have a document that is officially and digitally signed with your handwriting, and is legal in every way.

Pariah S. Burke is the author of *Mastering InDesign CS3 for Print Design and Production* (Sybex, 2007), and other books.

COLORING WITH ADOBE KULER

Designers pretty much accept Adobe's Big Four apps as the tools of choice for creating brochures, flyers, ads, and Websites. But Adobe has another tool that should take its rightful spot next to Photoshop, InDesign, Illustrator, and Flash in the design toolbox. It's called Kuler (pronounced "cooler"), and its name is appropriate.

Users' Color Themes The Kuler Website allows you to access user-generated color themes.

Kuler is a free, Web-based application that allows users to browse, create, and share color themes via the Kuler Website (kuler.adobe.com), a Kuler desktop application, or a Kuler Dashboard widget. Kuler is also available from your favorite Adobe CS4 desktop applications. And you don't have to be a CS4 user to take advantage of it.

Color is one of the most important aspects of design, but not all designers can create pleasing color combinations. This is where Kuler can help. Designers can browse thousands of color themes created by the Kuler community, and search for color themes by tag, theme, hex color, and more. But it doesn't stop there. Users can also create new themes based on colors in an image they upload from the desktop. Once you've found a color scheme you like, you can rate it, add it to your favorites, export it as an Adobe Swatch Exchange file for use in any Creative Suite app, or add it directly to your CS4 app's Swatches panel. Along with complementary colors, Kuler can create a set of shades of the base color or of analogous, monochromatic, or compound colors.—JAMES DEMPSEY

Sharing Home Movies with iWeb

By Adam Berenstain

The My Albums templates in iWeb aren't just for pictures—they hold videos, too. Here's how to use them.

Movies on Your Mac Select File ▸ New Page to choose a My Albums template for your site from any iWeb theme. Next, select View ▸ Show Media, and click the Movies button in the Media Browser to see your iMovie projects, iTunes videos, and more.

Drag the files you want to share onto your album's main page—iWeb creates a page for each movie. Drag to arrange the previews in any order you like. iWeb imports the movie with a cryptic naming convention, but you can change the name manually in the sidebar at the left and on the movie page.

YouTube Videos First, add a new Movie page to your album. Select the album in the sidebar, and then select File ▸ New Page and choose a Movie template. Then open your YouTube video in a Web browser and copy its URL from YouTube's URL address field or the address bar in your browser.

From iWeb's Media Browser click the Widgets button. Drag and drop the YouTube widget onto the video placeholder, paste the YouTube URL in the widget's window, and click Apply.

Recycle the iSight Widget Add a new Movie page, and drag and drop the iSight Movie widget from the Media Browser onto the video placeholder to start recording. If you want to record a new movie later, you can simply select the old movie and record a new video over it.

Reviews

HARDWARE, SOFTWARE, AND ACCESSORIES FOR YOUR CREATIVE ENDEAVORS

HARDWARE

Adesso CyberTablet 6400 △

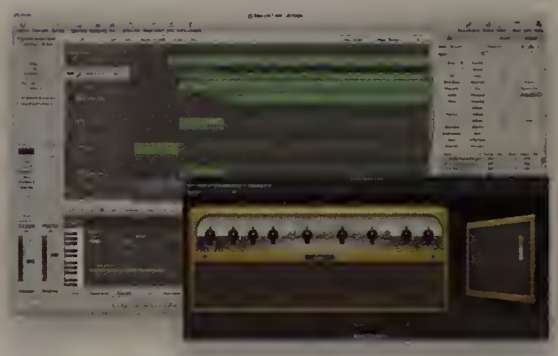
Adesso's CyberTablet 6400 is a consumer-level graphics tablet and, as such, it lacks some of the higher-end features of the pro-level tablets such as higher resolution tracking, tilt capability, and a variety of configuration options. But if you've never used a tablet before, you're looking for a tablet for light-duty photo retouching and illustration, or you need a more comfortable input device, the Adesso CyberTablet 6400 is a pretty good deal (macworld.com/5342).

●●●½; $70; Adesso, www.adesso.com

OWC Mercury Pro 8X Blu-ray External △

OWC's quad interface Mercury Pro 8X Blu-ray External drive can burn single- and dual-layer Blu-ray discs, as well as perform the standard SuperDrive capabilities. And though we had trouble with its USB connection, its three other connections worked flawlessly and turned in respectable speed-test results. If you're looking for a new optical drive, and one that can burn high-definition Blu-ray movies as well, OWC's Mercury Pro 8X Blu-ray Pioneer BDR-203 External drive is worth a look. Its case design doesn't get in the way, or otherwise deface your desktop, and it turned in respectable speed-test results. We did have trouble using the USB connection for burning a dual-layer DVD in Toast, but with three other connection options available, many Mac users can overlook that bug (macworld.com/5345).

●●●½; $350; Other World Computing, www.macsales.com



SOFTWARE

Logic Express 9 △

Logic Express 9 is a tremendous value for musicians seeking a tool more powerful and musical than GarageBand. But with that power comes complexity. Logic Express feels and operates like a professional tool. While Apple has done much to tame the beast that is Logic, some users will still find its advanced features confounding (and hard to locate). Work through the application's challenges, however, and you'll receive many harmonious rewards (macworld.com/5448).

●●●●½; $199; Apple, www.apple.com

Toon Boom Studio 5

Many artists today want to venture into animation but either don't have the hand-drawing capabilities or the time and resources to learn 3-D animation. Toon Boom Studio 5 offers infinite possibilities with easy-to-use stop-motion, traditional paper, or digital animation, and even cut-out and rotoscoping. At first glance, Toon Boom Studio 5 looks like a simple, almost kid-like program. But don't be fooled. The new stop-motion feature, annotation layers, and new export functions make this a fun program to use and one rich in sophisticated features (macworld.com/5449).

●●●●; $400; Toon Boom Animation, www.toonboom.com

Top Products

YOUR GUIDE TO THE BEST HARDWARE WE'VE TESTED

DVD BURNERS
Desktop and Portable

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
MediaStation 8X External Blu-ray Writer (pictured) www.buffalotech.com	●●●●	$341	Blu-ray	5344
d2 DVD±RW w/LightScribe www.lacie.com	●●●●	$119	desktop	3900

CAMCORDERS
High Definition

PRODUCT	RATING	PRICE[A]	TYPE	FIND CODE[B]
Flip MinoHD (120 Minutes) (pictured) www.theflip.com	●●●●½	$230	mini camcorder	5512
Vixia HG21 www.canon.com	●●●●	$659	120GB HD	5182

[A] All prices are the best current prices taken from a PriceGrabber survey of retailers at press time. [B] In a browser's address field, typing a find code after *macworld.com/* takes you to a product's review or overview.

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New! Version 3.5

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freeverse.com/soundstudio

FREEVERSE

MAC OS X HINTS

The insider tips you won't get from Apple

By Rob Griffiths

Navigate Stacks with the Keyboard

In OS X 10.5, there were a couple of ways to navigate Stacks with your keyboard: Once a stack was activated, you could move among its items by using the arrow keys or jump to an item by typing the first few letters of its name.

Those two tricks work in 10.6 too, but there's also something new—you can now drill down into folders within a stack. To do so, you must be using Grid or List view. Select the folder (using arrow keys or letters) and press Return (or ⌘-O or ⌘-Down Arrow) to drill down into that folder. To get back to the parent folder, press ⌘-Up Arrow.

You can use other modifier keys with folders in Grid or List view, too: Press ⌘-Return to open the selected folder in the Finder and close the Stack. Press ⌘-Option-Return to open the selected folder in the background and leave the Stack open.

Stacks Navigation In Snow Leopard, you can now open folders within stacks by using the keyboard: Just select the folder you want, then press Return; the folder will open in a new stack.

Select Exposé Windows by Name

If you prefer the keyboard to the mouse, Snow Leopard adds a new way to select windows in Exposé. After activating Exposé in All Windows mode (by pressing F9 or whatever key you've assigned it), you can select a window by starting to type its name. Depending on the names of the open windows, that can take as few as one keystroke, though it will often take more to uniquely identify a window.

As you type, the system will highlight the currently selected windows with a blue halo. When the window you want to switch to is highlighted, press Return to bring it to the foreground.

Temporarily See Hidden Files

By default, many of OS X's files and folders—especially Unix-only folders, such as '/usr,' '/etc,' and '/bin'—are hidden from view in the Finder. But you can change the default, so that you always see these hidden files and folders, by typing this command in Terminal (/Applications/Utilities):

```
defaults write com.apple.Finder AppleShowAllFiles YES
```

After you press Return and restart the Finder (hold down the Option key and then click and hold on the Finder icon in the Dock), you should be able to see every single file and folder on your Mac. (You can reverse the effect by changing the **YES** to **NO** and again restarting the Finder.)

If you don't want to see the items all the time, Snow Leopard offers a new way to see them temporarily, but only in Open and Save dialog boxes: In one of those dialog boxes press ⌘-Shift-Period (.). This command is a toggle; to hide the hidden files again, press ⌘-Shift-Period again.

Create Mail Accounts Manually

By default, OS X 10.6's Mail sets up accounts for you automatically, based on some preliminary information you provide. While this automatic setup works well enough most of the time, sometimes you need to set up an account manually. For instance, Mail thinks Gmail accounts always use IMAP, but you might prefer to use POP. Also, the setup wizard always tries to test the connections to a new account's mail servers; that doesn't work if you want to set up an account while offline.

The solution turns out to be simple: On

Have a Hint to Share?

Go to MacOSXHints.com to submit it. This column was based on tips from Philip Dooher and anonymous contributors. Each month, the author of our favorite tip receives the *Help Desk* mug.

MUG PHOTOGRAPH BY PETER BELANGER

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POWER TIP OF THE MONTH

Quickly Add iTunes Media, with Services

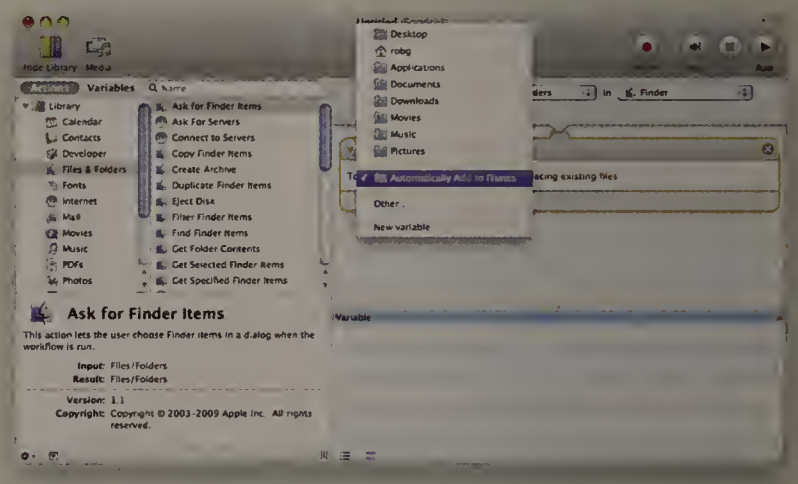
iTunes 9's new Automatically Add To iTunes folder makes it easy to add media to your iTunes library: Anything you put in that folder (such as downloaded MP3 files) is (as the name implies) automatically added to your iTunes library. But you can make that process even easier with Snow Leopard's Services.

Open Automator (in the /Applications folder), and select the Service template. At the top of the pane on the right, set the first Service Receives Selected drop-down menu to Files Or Folders and the second to Finder. (That way, your service will work only in the Finder and only when you have files or folders selected.)

Next, select Files & Folders in the Actions library in the leftmost pane and drag either Copy Finder Items or Move Finder Items to the pane on the right. (Your choice obviously depends on whether or not you want to leave a copy of the original files where they are.)

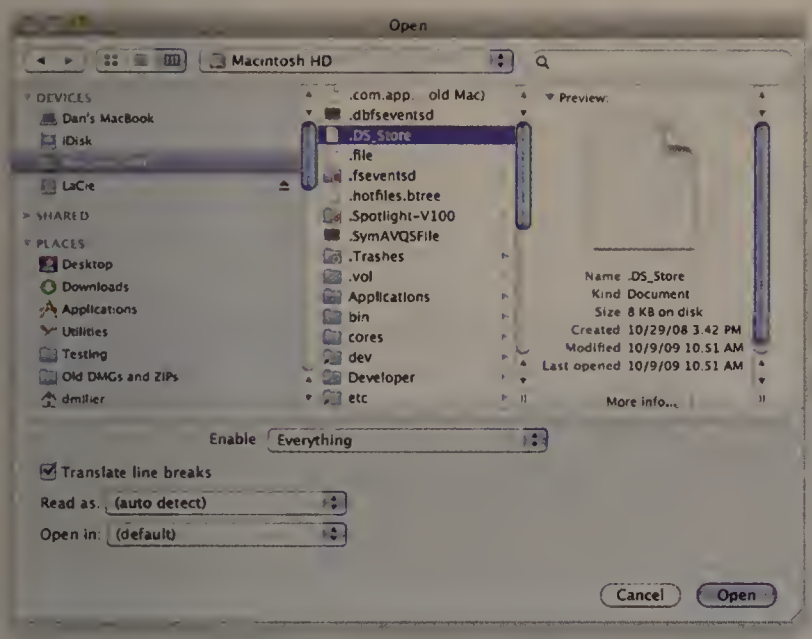
In the Move or Copy action, click the To drop-down menu and select Other from the list. When the file dialog box appears, navigate into your iTunes Music folder, select the Automatically Add To iTunes folder, and click Choose. Save your service (File ▸ Save), giving it a short, simple name (which will appear in the Services menu), such as 'Add To iTunes.'

Finally, open the Keyboard system preference and click on Keyboard Shortcuts. In the column on the left, select Services and then scroll down to the Files And Folders section in the right column. Find your newly created service, click in the empty space to the right of its name, and assign it a keyboard shortcut.



iTunes Service Copy or move files to the Automatically Add To iTunes folder by creating a service and giving it a keyboard shortcut.

ICON BY PAUL HOWALT



View Hidden Files If you want to see files and folders that are normally hidden in the Finder, a simple Terminal command will let you.

the first Add Account screen (which appears after you click the plus sign on the Accounts tab of Mail's preferences), enter your name and e-mail address, and then hold down the Option key. The Create button will change to a Continue button. Click Continue to set up your account manually.

Reprogram iTunes' Green Button

Prior to iTunes 9, clicking the green button in the upper left corner of the iTunes window turned the window into a miniplayer. In iTunes 9, that button changed into a true "maximize" button; to get the miniplayer, you had to Option-click the green button.

In iTunes 9.0.1, things are back as they were—clicking the green button switches to the miniplayer and Option-clicking it maximizes the window. If you prefer the green-button functionality of iTunes 9, you can revert to that behavior. Quit iTunes and enter this command in Terminal:

```
defaults write com.apple.iTunes zoom-to-window -bool YES
```

Restart iTunes. Now clicking the green button should maximize the window. To reverse the change, quit iTunes and enter this command in Terminal:

```
defaults delete com.apple.iTunes zoom-to-window
```

Launch iTunes. Now the green button will show the miniplayer when clicked.

WHAT'S ONLINE

Get iTunes Info Quickly get the count, play time, and size of multiple songs (macworld.com/5446).

Make Dictionary Use One Window Keep it from opening a new window for each word (macworld.com/5389).

Control QuickTime X Playback Speed Specify fast-forward and rewind speeds (macworld.com/5447).

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MAC 911

Solutions to your most vexing Mac problems

By Christopher Breen

Recovering an Erased Hard Drive

Q: I accidentally erased one of my drives using Disk Utility. Nothing has been written to the drive since it was erased. Do you have a suggestion for the best software for recovering the files?

William Eschenfeldt

A: If you didn't choose one of the secure erase options (which will overwrite your data with junk, making it much harder to recover the data), you have a decent shot at getting your data back. I can suggest a couple of tools that I've had success with.

The first is Prosoft Engineering's $99 Data Rescue 3 (www.prosofteng.com). Unlike some other utilities that demand that you install them on a drive before the bad thing happens, Data Rescue 3 works after the effluent has forcefully made contact with the rotating blades (see "Rescuing Deleted Data"). I've also had good results with SubRosaSoft.com's $90 FileSalvage (www.subrosasoft.com). Like Data Rescue 3, it recovers lost data after the damage has been done. Additionally, it lets you search for specific file types.

Before you invest your money in either program, download the free demos. When you run each demo, it'll display all the files it can find. Choose the program that best identifies your data.

Note that, regardless of which tool you pick, recovering data can take hours. Data Rescue 3 is faster than the previous version, Data Rescue II, but it can still take a long time to retrieve your data. The same goes for FileSalvage. If you have a high-capacity drive from which you're attempting to recover data, start the job before going to bed. By the time you awaken, your recovered files should be waiting for you.

Rescuing Deleted Data Data Rescue 3 (pictured) and FileSalvage can recover data from an erased hard drive.

Have a Problem?

Go to the Mac 911 forum (macworld.com/2467) for help with your misbehaving Mac or applications.

Combining PDF Pages in Snow Leopard

Q: Ever since I upgraded to Snow Leopard, I've been unable to combine PDFs the way I could in Leopard with Preview. Any suggestions?

Jamie Stone

A: Snow Leopard works a bit differently than did Leopard. If you drag thumbnails from one PDF window to another, then place them below the other document's thumbnails, and save—as you would in Leopard—you wind up with a document that contains just the pages you dragged into the sidebar. The trick is to drag thumbnails *on top* of a thumbnail in the document you're dragging to. This combines the pages. If you then want to rearrange the pages, just drag them where you like—they'll stay within the combined document. Save your document and you're done.

If you've opened two PDF files at the same time and therefore find both documents in the sidebar, the technique is similar. Expand the document you want to move pages from by clicking the left-pointing arrow and drag the pages you want to copy on top of the icon of the other document in the sidebar. Reposition as you like. When you're done, choose Save All from the File menu.

Resetting Safari

Q: Whenever I conduct a Google search with Safari 4, I find that my search preferences aren't saved. I've chosen to view 100 results without SafeSearch, yet Google shows me the default 25 results with SafeSearch. I save

my preferences yet again and still they won't stick. What do I do?

Via the Internet

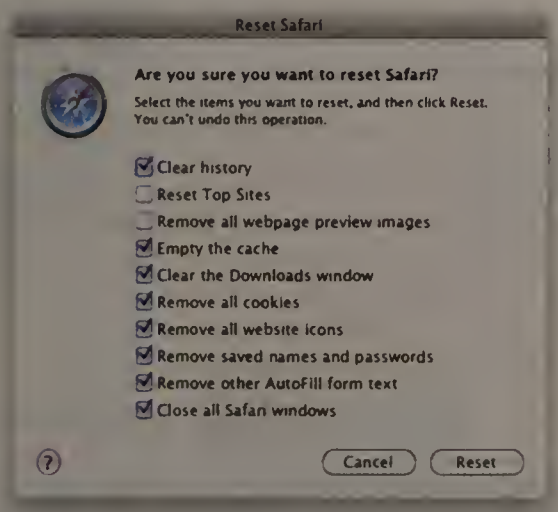
A: You could try small measures first—wiping Safari's History or emptying its cache. If that does the job, great. If it doesn't, I'd bring the big gun to bear and choose Reset Safari from the Safari menu. When you do this, a Reset Safari window appears, giving you a load of options—Clear History, Reset Top Sites, Remove All Webpage Preview Images, Empty The Cache, Clear The Downloads Window, Remove All Cookies, Remove All Website Icons, Remove Saved Names And Passwords, Remove Other AutoFill Form Text, and Close All Safari Windows (see "Safari Reset"). You can select just the options you want—I'd consider unchecking Remove Saved Names And Passwords and Remove Other AutoFill Form Text, as losing this information can be inconvenient. With luck, Safari will then pay more attention to your desires.

Solutions for Synchronizing Folders

Q: Is it possible to make a folder that acts as a shortcut to another folder yet contains copies of files from the original folder? I'd like to have such folders for backing up my school homework.

Ross Wehner

A: What you're after is not a shortcut but rather synchronized folders. The idea being that when you drop something in one folder, the other folder is automatically updated with the contents of the first.



Safari Reset The Reset Safari window provides you with loads of reset options.

ICONS BY PAUL HOWALT

One option is to create an Automator workflow that includes three actions:

`Get Specified Finder Items`
`Get Folder Contents`
`Copy Finder Items`

The first action refers to the source folder you save your files to. The second action tells the Mac what's in that folder. And the third copies the files to another folder.

Now choose File ▸ Save As Plug-in and, in the sheet that appears, give your plug-in a name. Next, choose Folder Actions from the Plug-in For pop-up menu, attach the plug-in to the source folder, and then click Save. Now, when you put anything into the Source folder, it will automatically be copied to the destination folder.

This is a reasonable way to do things if you're not worried about version control—having newer files overwrite older files that you'd like to keep. If you want greater control over how things are copied, look at a synchronization tool. Of those tools I prefer Econ Technologies' $40 ChronoSync (www.econtechnologies.com).

And then there's Dropbox (www.dropbox.com). This online storage service provides you with 2GB of storage for free. When you install Dropbox on your computers, each is outfitted with a Dropbox folder. When you move a file to your Dropbox folder on one computer, that file is synced to all of your Dropbox folders on your other computers, as well as with your storage area on the Dropbox Website. If 2GB of storage isn't enough, you can buy 50GB for $10 a month ($99 a year) or 100GB for $20 a month ($199 a year).

Bugs & Fixes BY TED LANDAU

When PDFs Won't Load in Safari Snow Leopard's version of Safari is occasionally unable to open PDF files, producing an error that reads "AdobePDFViewer cannot find a compatible Adobe Acrobat or Adobe Reader to view this PDF." The crux of the problem is the AdobePDFViewer plug-in, which is 32-bit software. To fix the problem, go to Safari's Get Info window in the Finder and enable Open In 32-Bit Mode, which allows the plug-in to run. Or disable the plug-in by dragging it from the Internet Plug-Ins folder (/Library/Internet Plug-Ins). (If the plug-in is not there, look in the matching location in your Home directory's Library.) Quit and relaunch Safari. PDFs should now load using Safari's built-in PDF viewer, and Safari should be faster, as it's running in 64-bit mode.

Font Problems in Snow Leopard Did the spacing between characters of certain fonts in some of your documents change after you upgraded to Snow Leopard? This Snow Leopard problem apparently results from changes to how the new operating system handles fonts—specifically that Snow Leopard doesn't support PostScript Type 1 fonts, at least not where Apple supplies its own version of the font. This problem is particularly noticeable in QuarkXPress. Fortunately, most Mac users, outside of the professional printing community, do not use any PostScript fonts, especially not the older Type 1 format.

Too Many iPhone Notes in Mail? With iPhone 3.0 software you can sync notes from the Notes app on your iPhone back to your Mac. Notes appear in Apple's Mail application, but you may also find duplicates in other locations such as in the Inbox listings for each of your mail accounts. To remove and prevent them from accumulating in the future, open Mail's Preferences, select the account showing duplicates, select Mailbox Behaviors, and disable the Notes: Show Notes In Inbox option.

Senior Contributor **Ted Landau** is the founder of MacFixIt (www.macfixit.com). Share your problems at bugs@macworld.com or on Macworld.com's Mac 911 forum.

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AWARDS & REVIEWS

Macworld — Mac Addict RATED 5 GREAT

"The design, materials, and performance of the units are all tap notch" - Macenstein

"Lightning Speed Makes Copying Over Files a Snap" - Picture Business Magazine

10.6 Snow Leopard Ready — Time Machine Ready — 48-Hour Warranty Service

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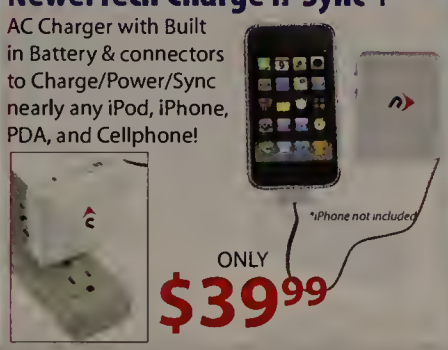

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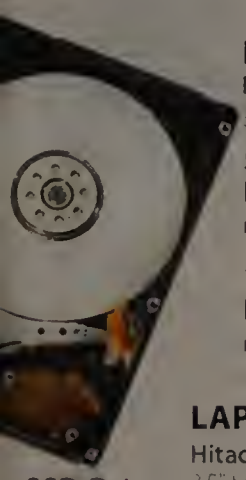

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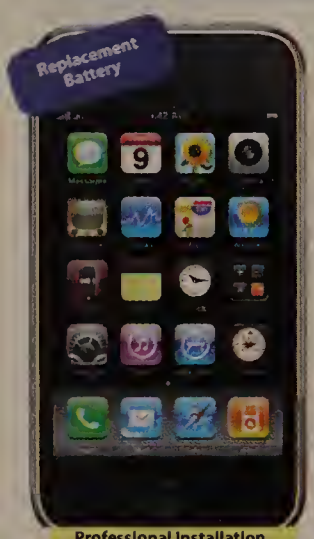

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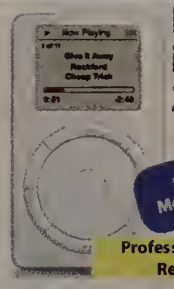

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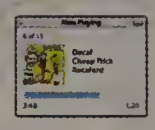

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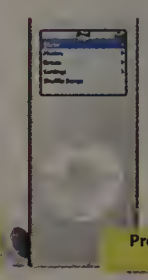

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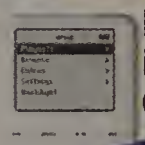

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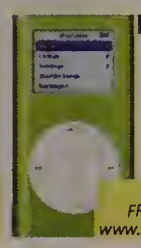

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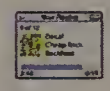

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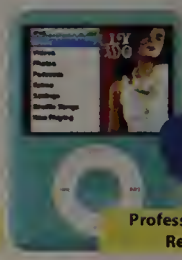

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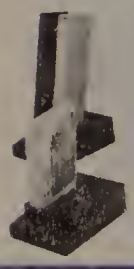

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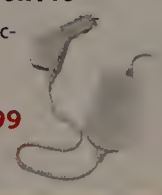

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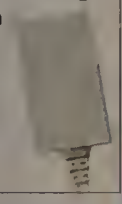

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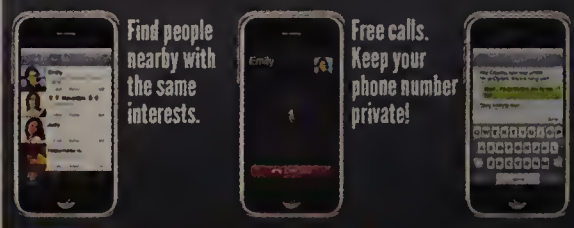

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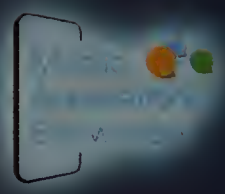

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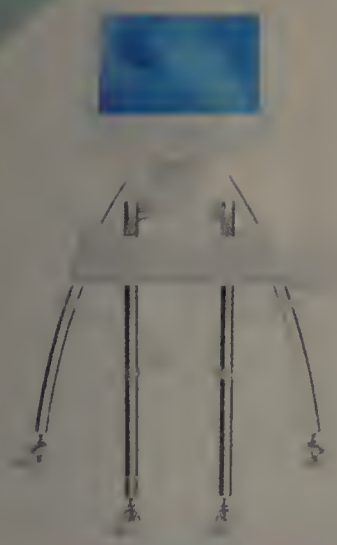

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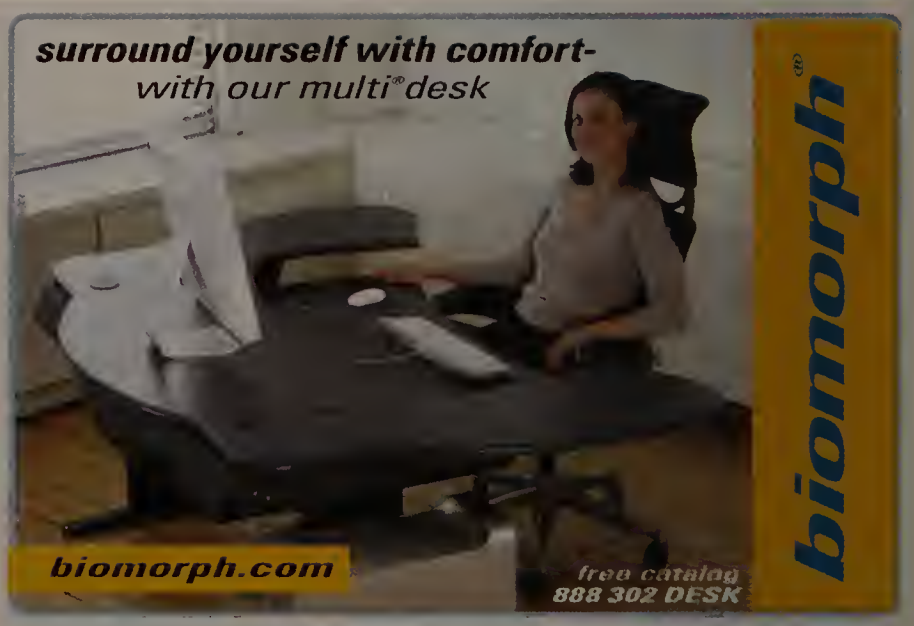
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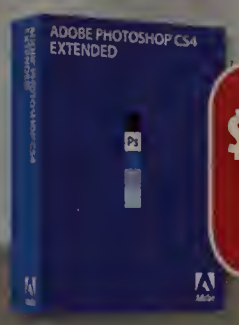

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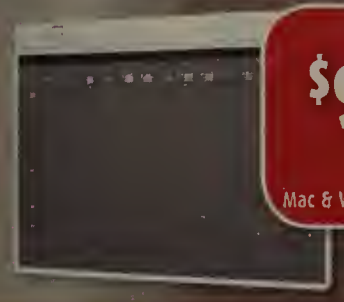

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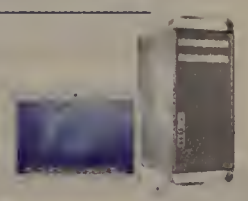

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By John Gruber

Why Installing Is a Drag

There's got to be a better way to download and run new Mac software

Alexander Limi, one of the developers of the Firefox Web browser, wrote a thoughtful piece a few months back about the complexity of installing Firefox on the Mac (macworld.com/5476). The Firefox team has followed the common convention of delivering Firefox as a downloadable disk-image file, which, when mounted, uses a background image and an alias to the Applications folder to encourage users to copy the app from the mounted image to their startup drive.

Limi and his colleagues commonly see friends and family members drag Firefox directly to the Dock, which forces the Mac OS to unpack and mount a disk image every time they click that icon, dramatically increasing the launch time. Other users assume they must double-click the disk-image file and then double-click Firefox every single time.

The whole concept of a virtual volume is just too abstract for the average user. There's a wonderful simplicity to the way that you can install nearly any good Mac app just by copying it to a spot on your hard drive you prefer; and you can uninstall that same app simply by dragging it to the Trash.

But to make this method work for apps delivered by disk image, users have to understand that they must first copy the app from the image to their startup drive. This is where some people get lost.

The iPhone shows just how much simpler the concept of app installation and *un*installation can be. There is only one place where iPhone apps can be: on a home screen. If you see the app icon, the app is installed. If you want to get rid of it, you just invoke jiggle mode and tap that icon's X button. Even better, there are no files to "clean up" after an iPhone installation.

Limi originally proposed solving the problem by adding an installer app to the Firefox disk image. An installer, even if it's merely copying the app to the Applications folder, arguably provides a more iPhone-like installation process. The difference, though, is that on the iPhone, the App Store isn't just the conventional way of installing and updating apps—it's the only way. On the Mac, installers are considered at least slightly unconventional. And when users run an installer, they don't find out what's been installed where. (Yes, you can use the Show Files command in the installer's File menu—but the only people who know about this command are those of us who aren't confused by any of this stuff in the first place.)

Zip It

One promising approach is the resurgent trend of delivering Mac apps as simple .zip archives (a technique that harkens back a decade to when Mac apps were typically delivered as StuffIt archives).

When you first launch an app, your Mac should offer to install it for you—and move it to the right place.

PHOTOGRAPH BY PETER BELANGER

Download the .zip file, double-click, and there's the app. Just like with disk images, what users *should* do then is move the app to their Applications folder. But—and this is the advantage of using a .zip archive over a disk image—*they don't have to.* Users can just launch the app right from their Downloads folder, and it'll work just fine. Or they can drag it to their Dock, and it'll work just fine. It's not tidy, but there's no confusing abstraction like a virtual disk volume that will disappear after they log out, for reasons they don't understand.

An even better approach: When you double-click certain non-app bundles of software, like Dashboard widgets and System preference panes, the Finder asks if you would like to install them. If you agree, the system goes and installs the items in the right location.

Perhaps Apple should do something like that for apps, so that when you first tried to launch an app, your Mac would offer to install the app—and if you agreed, it would move it to the Applications folder and launch it from there.

Patrick Dubroy proposed something along these lines two years ago in a fine essay titled "Why Is Installing Software on a Mac So Complicated?" (macworld.com/5477). And a few apps do this themselves, most notably Delicious Monster's Delicious Library and Potion Factory's The Hit List. After some consideration, Limi announced that Firefox, too, will be distributed in a way that eliminates the disk image and offers to move the program to the Applications folder when first opened.

These are good steps by individual developers. But the overarching problem remains: Mac OS X needs a single, obvious, easy, standard way for new applications to be installed.

John Gruber is the author of Daring Fireball (daringfireball.net). A version of this article appeared there in September 2009.

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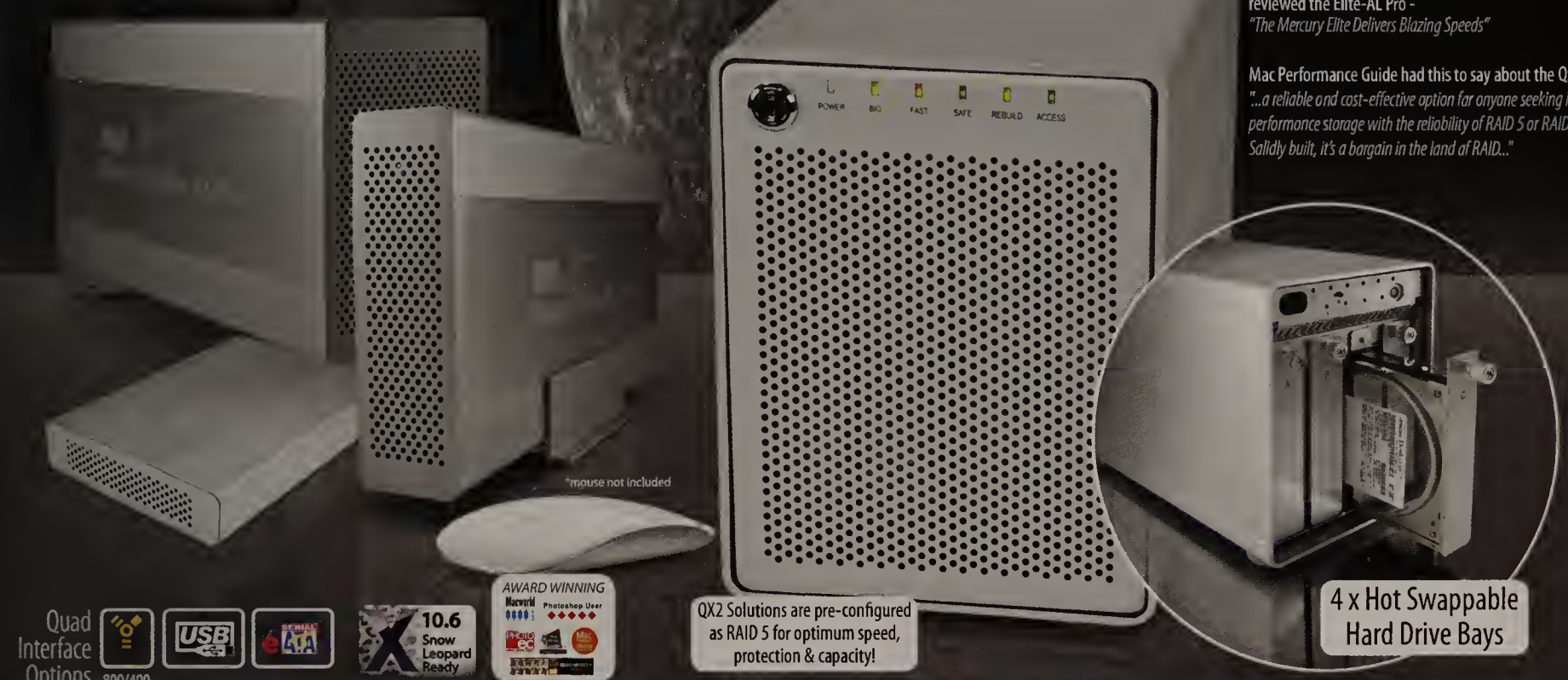

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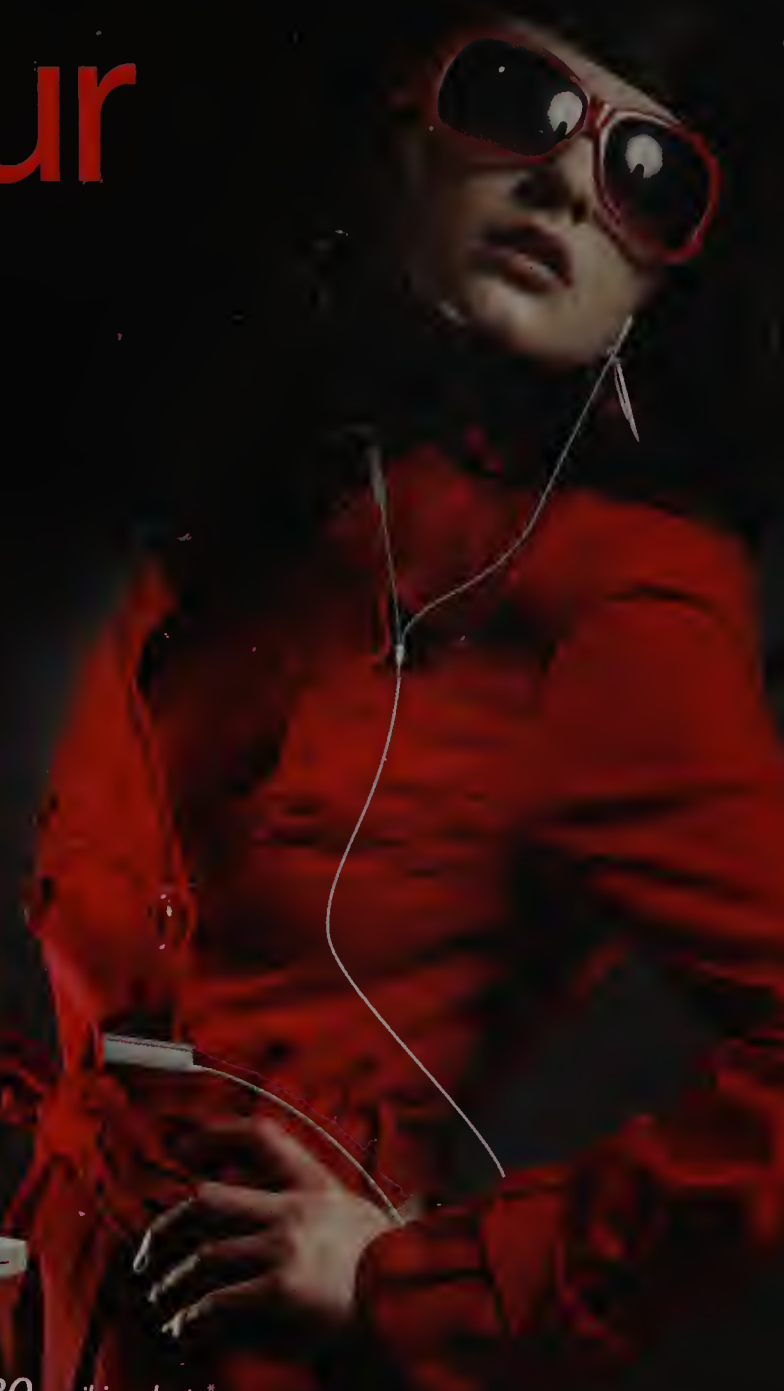

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